Where talent meets opportunity

SRI SATYA SAI UNIVERSITY
OF TECHNOLOGY AND MEDICAL SCIENCES

3.4.1: The Institution ensures implementation of its stated Code of Ethics for research through the following:

1. Inclusion of research ethics in the research methodology course work
2. Presence of Ethics committee
3. Plagiarism check through software
4. Research Advisory Committee

2017-18 TO 2021-22

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Policies and Regulations
for
Conducting Research and Consultancy

Centre for Research
Sri Satya Sai University of Technology and Medical Sciences, Sehore

December- 2021

Index

1.0 Introduction

Research is an integral and important part of any higher education system. Quality research improves the academic delivery of the faculty members, elevates the academic value of students, and supports the university to contribute towards the society's professional, industrial, and economic development. Sri Satya Sai University of Technology and Medical Sciences, Sehore (SSSUTMS), actively promotes research among its faculty members and students. In addition to basic research, which is the backbone of every university, SSSUTMS also gives adequate importance and support to applied research. Research at SSSUTMS relies on the motivated intellectual pool of its learned faculty members, research fellows, collaborating institutes, industries, and stakeholders. Students are motivated to undertake research projects as a component of their curricular learning under UG and PG programs. The faculty members, research scholars and fellows are regularly encouraged to publish their findings in reputed journals and present papers at conferences of national and international repute. SSSUTMS, facilitates and motivates all researchers and innovators to participate in competitions, nominate for awards and apply for government and non- government grants to promote research and innovation.

1.1 Scope and Purpose

This document provides a detailed description of the Research Policy and regulations of SSSUTMS based on the statutes and vision of University. The document provides guidelines to support and enhance research activities. The document should be read in conjunction with the relevant ordinances and regulations, and any other policies, procedures or guidelines as may be issued by the university research cell from time to time. This document shall be kept under review by the research council of University. The research council shall be the principal research advisory and regulatory body of the university and shall formulate and promote the research programs and initiatives of the university.

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The purpose of the Research Policy is to create a vibrant atmosphere of research among faculty and researchers at SSSUTMS. The policy shall serve as an overall framework within which research and innovation will be carried out at the university, and the purpose of this document is to:

- Present a policy framework for the management, support and development of research at the SSSUTMS.
- Provide a strategy for achievement of the research goals.

1.2 Applicability of the Policy

This document will be applicable to all SSSUTMS faculty members, staff and students involved in any form of research activity.

1.3 Objectives

This policy provides a broad framework to guide research and integrity of scholarly inquiry at the university. The objectives of policy are as follows:

- Promote and facilitate collaborative and/or interdisciplinary research and enhancement of research networking capacity and infrastructure.
- Increase and effectively manage the resources and research support for its members and the wider university community.
- Provide education and training in research and related skills, especially for graduate and undergraduate students and thereby enhance the academic programs of their constituent academic units.
- Contribute to the university‟ s strategic educational and research missions and to support synergies between research, teaching and learning.
- Transfer and mobilize knowledge gained through research for the benefit of society, via a variety of mechanisms as appropriate.
- Enhance the reputation of its members, the constituent academic units, and the university through the quality of its work.
- Ensure integrity, quality and ethics in research

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2.0 Research Council

The primary role of the research council is to act as an apex body for research at the University. The Research Council is expected to fulfill its duties and assigned tasks through its regular meetings and discussions, involving and catering to the interests and opportunities to all domains of education of the university.

The key objectives of the Research Council shall be as follows:

- To review proposed research and extension projects taken up by the university annually, including intermediate requests.
- To provide recommendations and advise on research projects through grants and approvals by various government and non-government sources.
- To facilitate availability of infrastructure for the above stated research works by the university and its centers and collaborations.
- To promote activities and events to motivate, inspire and support ideation, innovation and dissemination of knowledge towards socio-economic development of the state and country at large.

COMMITTEE MEMBERS

S.No.	Name
1	**Prof Hemant Kumar Sharma (Chairman)**
2	**Prof Prashant Singh Kalhans (Convenor)**
3	**Prof. Alka Thakur (Convenor)**
4	**Prof. Jitendra Sheetlani**
5	**Prof. Neelesh Choubey**
6	**Prof Prabodh Khamparia**
7	**Prof. Neelu Jain**
8	**Prof. Geeta Khoobchandani**
9	**Prof. Gajraj Singh Ahirwar**
10	**Prof. Indrajeet Singh Yadav**
11	**Prof. Hemant Kumar Sharma**
12	**Prof. Abhilasha Pathak**

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13	**Prof. Sunil Kumar Shah**
14	**Prof. Kanchan Shrivastava**
15	**Prof. M D Singh**
16	**Prof. Dhiraj Shinde**
17	**Prof. Rishikesh Yadav**
18	**Prof. Mamta Vyas**

The research council suggested as part of the research policies and regulations are suggestive bodies working towards the achievement of vision statement, execution, and adaptation of the document at the university.

The Board of Management (BOM) of the university on recommendation of the Academic Council (AC), or as per the vision map of the university, sanction, grant and make provision of all infrastructural and logistic support to promote research and innovation atthe university.

The Academic Council (AC) on matters related to research and innovation shall, as per suggestions of the Research Council (RC), take decisions and recommend for action to the RC keeping in view the overall academic vision, growth and progress of each departmentas well as the university as a whole.

Further, the RC shall act as the apex body to advice and execute on the Research policies and regulations at the university.

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The Research council shall perform the following functions including:

i. Recommend a faculty to recognize as a supervisor/Principal Investigator for a research work/project.

ii. Suggest mechanism to ensure compliance of prevailing UGC Regulations regarding PG and Ph. D. programs.

iii. Suggest process of registration for doctoral degrees through entrance examination as specified in the UGC Regulations.

iv. Recommend names of distinguished academicians from outside the university for co-guiding a research work/project,

v. Consider cases of registration for doctoral degrees where there is change of subject / faculty.

vi. Consider cases of different opinion between examiners of doctoral thesis and other exceptional situations not expressly covered by rules on the subject.

vii. Maintain quality and relevance of research works at the university and ensure prevention of plagiarism.

viii. Mobilize human and financial resources to facilitate development of centers of excellence for promoting domain specific research works at the university through research fellows, fellowship programs, chairs, government and non-government funding's and collaborations.

ix. Promote and facilitate a mechanism to motivate publications and generate IP by the university faculties and students.

x. Connect and align the university research endeavors to societal development through research works focused on attainment of various Sustainable Development Goals (SDGs), and industry academia collaborations.

xi. Acknowledge, recommend, and nominate faculty members to participate in competitions and for awards within and outside the university campus.

xii. Perform other functions, as may be assigned to it by the Board of Management or the Academic Council with regards to maintenance of standards and promotion of research and innovation.

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Office of Dean- R&D

The Research Cell of SSSUTMS is functional through the office of Dean, R&D which aims at promoting research, particularly interdisciplinary research and related activities. Some of the key functions of the cell are to:

1. Motivate and encourage faculty members and students to engage in research and developmental activities, arranging FDPs to update the university faculty members about upcoming research areas.
2. Support faculty members to initiate and/or continue research through good quality publications, sponsored research projects, consultancy, product developments etc.
3. Maintain record of research works and publications of the university.
4. Analyze research data of the University for qualitative and quantitative assessment.
5. Promote and facilitate inter-disciplinary research activities.
6. Encourage research for funding from various agencies and/or consultancy activities.
7. Promote development of working models/prototypes/projects by faculty members and students.
8. Develop specialized laboratories to cater to evolving needs of the industry and society.
9. Facilitate coordination with external members/bodies with a motto to promote and facilitate collaborative research.
10. Conduct and maintain records of regular meetings of various committees

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3.0 PhD Regulations

SSSUTMS has a strong commitment to high quality research and aims to enhance the professional competence of the Ph.D. scholars. The Ph.D. regulations provide information on Ph.D. program of the university for Full Time/ Part Time Ph.D. scholars. Every scholaris expected to follow the procedures laid down by the University as Ph.D. regulation in accordance of UGC regulations.

4.0 Research Grants and Financial Support

Financial support and funds are primary requisites to any research endeavor and its outcomes. SSSUTMS through grants and financial aids from its sponsoring body, various governments, non-government and industrial organizations facilitates funding for research works taken up by its students and faculty members. The various mechanisms formulated for the purpose are coordinated by the office of Dean (R&D) and administered bythe research council (RC) for execution of the same.

4.1 Financial assistance for research by SSSUTMS

SSSUTMS encourages its faculty members to participate in research and innovation activities to boost ones' personal and the university's IP as well as contribute to the social development at large. Annually, financial aid is granted by the university to its faculties to pursue projects related to fundamental and applied research, engage in outreach activities with an aim to identify social issues, work towards knowledge up gradation add to theory by publishing in identified research data bases and to pursue collaborative research works.

The faculty members can apply for financial assistance for one or more of the following purposes:

1. As seed funding for identified projects in areas of specialization.
2. To develop proof of concept or prototype for a novel research idea, this can further be applied for grant to various government and non-government bodies.
3. For patent filing and processing with the recognized publishers.
4. For travel to disseminate research findings and collect primary data.
5. For organizing national/international conferences with an aim of capacity building and knowledge sharing about innovations, best practices, and discussions on research theory in specific domains.

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The funding will also include conducting experiments, printing and other stationery procurement, equipment, and machinery purchase, etc. Further the faculties receiving such funding will be encouraged to apply for various related schemes of government and non-government grants. Also, the faculties are expected to pursue for paper and patent publications in collaboration with SSSUTMS, for all such sanctioned research projects.

As part of its budgets to support research and innovation, SSSUTMS has developed a seed funding scheme for providing financial assistance to proposed research projects by its faculties. Accordingly, a minimum amount of Rs. 25000.00 and maximum of Rs. 3.00 Lakh can be sanctioned for duration of 1-3 yrs under this scheme. As a process for the same, faculty member/s are expected to prepare and submit a proposal for research in an identified domain,highlighting the objectives, process, and tentative expenses, to the office of Dean (R&D).

The Dean (R&D) submits these proposals before the research council approval. The research council is entrusted to conduct periodical assessment for all such sanctioned projects and guide the researcher and the team engaged. It is mandatory for all faculties to submit the project completion report and budget utilization summary to the office of Dean (R&D) within the approved duration.

Term and Condition for Principal Investigator (PI)

1. PI may only buy the items or equipment listed in the proposal mentioned herein.
2. Please also make sure that the equipment is procured on the lowest price/cost without making any compromising in quality.
3. If PI need to change budget in any head (within total budget) please inform the undersigned.
4. You can submit research proposal to funding agency, on the topic, for further financial support within stipulated time indicated in your proposal.
5. Project will be monitored on the basis of deliverables mentioned in your proposal in every 6 months

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4.2 Financial support from outside agencies

The university students and faculties are motivated to submit/nominate their works /proposals to the Government and Non-government funding agencies under schemes for promotion, support, and facilitation of research. Under extraordinary circumstances the university shall offer to provide for matching grants/building space to support infrastructure development or establishment of centers dedicated to research, innovation or incubation activities.

Such proposals prepared by university faculties and students need to be approved/sanctioned by the office of CF&AO. The office of Dean (R&D) shall support and document the progress of such projects/centers/chairs funded by an external agency, maintain its accounts and submit the utilizing certificate in time to the funding agency as per the requirement of the funding agency.

4.3 Establishment of research chairs/design chair

SSSUTMS may create dedicated research chairs/design chair for identified scope and domains of work in collaboration and/or through grants and financial support by NGOs, government and non-government schemes, endowment and corpus funding by industry and corporate houses. The research board shall administer, facilitate, and promote the activities and functions of such chairs created in the university as per the mandates of collaborations. A university professor/ senior faculty member from identified domain and expertise shall be appointed as Chair In charge.

4.4 Creating Centers of Excellence

SSSUTMS, through approval from its Board of Management, shall facilitate establishment of centers of excellence through its own funding and/or with support from industrial organizations/NGOs/government and non-government recognized agencies. A center of excellence shall be a constituent body/entity that provides leadership, best practices, research, support and/or training for an identified/focused area of research/education. Such centers shall concentrate on developing the existing capacity and resources and enable academicians/researchers to collaborate in allied disciplines and institutions for promoting education/projects that are relevant to local, regional, national and international development issues. The skill training, research and academic excellence at such centers shall be identified through publication, research projects, and consultancy assignments. The centers should have a close industry connect to facilitate academic and professional growth of its students, faculties, and research scholars.

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Through such endeavors the university may also plan to promote a particular department as a Centre of Excellence in due course of its establishment in a specialized thrust area to support the vision and the planned growth of the university.

5.0 Research Publications

To encourage research publications, SSSUTMS will implement the following policy:

- Each faculty member shall be expected to publish at least one research papers in refereed journals (UGC care/ WOS/ Scopus) at national and international levels in each semester.
- Faculty members shall possess the copyright of their scholarly publications.
- Upon acceptance of publication, each member of the research team agrees to provide a nonexclusive, irrevocable, global license to make their scholarly article manuscripts freely available under the terms of a Creative Commons Attribution (CC BY) or a more permissive license.
- Following the award of the license, faculty members will deliver a free electronic copy of the accepted manuscript to the relevant SSSUTMS representative in an acceptable electronic format (such as PDF).
- The University will deposit the accepted manuscript in a digital repository, with article metadata usually available immediately upon deposit and the manuscript being made accessible to the public on the date of first online publication (or the conference end date for conference proceedings) under a Creative Commons Attribution (CC BY) license.
- This policy applies to all scholarly articles, including conference proceedings, authored or co-authored while the person is a staff member of SSSUTMS, which includes any third-party content where rights in that content have been secured. Any article submitted, or accepted, for publication before the adoption of this policy will be exempted.
- Whilst the policy does not apply to monographs, scholarly editions, text books, book chapters, collections of essays, data sets, or other outputs that are not scholarly articles, University strongly encourages researchers to make them as openly available as possible.

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6.0 Patent Publications and Copyright

IPRs are legal rights that provide creators' protection for their original works, inventions, appearance of products, artistic works, scientific developments, etc. All participating researchers, students, and faculty members, must sign the Patent and Copyright Agreement of the University before the commencement of any research activity. SSSUTMS motivates and supports successful utilization of IPRs.

7.0 University policy for consultancy projects

SSSUTMS has established technological ecosystem for promoting research, consultancy and collaboration with other Institutions/Industries of repute through various MoUs. SSSUTMS encourages carrying out consultancy and any financial gain out of this will be shared between the institution and faculty & the staff involved. The faculty and researchers can engage in external consulting activities, subject to the University's rules and regulations. A separate consultancy policy document exists that would cover the all rules and regulation to facilitate consultancy activity by the researchers of SSSUTMS.

8.0 Collaborations for academic development

To promote, support facilitate academic growth and research endeavors at SSSUTMS, the departments/faculties shall promote collaborations with various national and international agencies like academic institutes, industries, government entities, NGOs, training institutes and research centers. The said collaborations may be for a longer time duration spanning from 1 year to 10year or shall be to facilitate events/activities like field trips, internships, training programs aimed towards academic and professional development of students and faculty members.

The primary objective of a MoUs between SSSUTMS and other University/HEIs/Industry/Research Institution is to create means for cooperative efforts that positively contribute to academic and research activities of the University. Individuals, government or private educational/research institutions, government or private companies/industries/Societies, NGOs etc can sign MOU withthe University.

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The MoU can be broadly classified into following types:

- MoU with academic/research institutions (government as well as private)
- MoU with various Ministries/Departments of Government of India/ State Governments.
- MoU with industrial partners or individuals.
- MoU with International bodies/Foreign Institutions.

Conditions for entering in MoU

- MoU shall be on mutually acceptable terms to all the participants.
- In case of MoU with an individual, the participant must be competent to enter into acontract.
- MoU should clearly indicate the mutual benefits of the participants.
- In case of financial and/or legal binding clauses, MoU should be discussed with the relevantstatutory bodies or competent authority or legal advisors of the university.
- For entering MoU with international bodies, guidelines of the Government of India should be strictly followed.
- For MoU with government agencies, it is required to get approval of the competentauthority for adopting their standard terms and conditions.
- For renewal of MoU, a proposal containing detailed report of achievements of previousduration of the MoU, and justification for renewal should be approved by the competent authority.

9.0 Awards

The University aims to improve overall research performance and promote research activities undertaken by various departments, faculty members and students. The University awards incentives for various research activities like quality publications, successful completion of external funded research projects etc. The details of awards are as follows:

University provides best Academician awards for outstanding contribution in the research fields:

The indicators of for award are identified in terms of , awards/prizes, more funding for the ongoing research, certificates and giving more weightage for the career advancement scheme inthe following categories;

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Awards for Quality publications: In order to encourage the faculty members of University towards making high-quality scientific publications, financial incentives will be provided. Authors of papers in International Journal, books or book chapters are provided with incentivesas per the guidelines of the university.

Awards for External funded research projects: To encourage and enhance the applications to theexternal funded research projects, the university has the award scheme for the external funded projects. The PIs and/or Co-PIs shall apply for the award after receiving the sanction letter from awarding agency.

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SRI SATYA SAI

UNIVERSITY OF TECHNOLOGY & MEDICAL SCIENCES
SEHORE (MP)

Research Methodology

Ph.D. Course Work (I) Syllabus

Research Methodology

Unit I:- Research Foundation:

Evolution of scientific inquiry and Research, definition, characteristics , types and objectives of Research, importance of Research methodology in scientific Research. Selection and formulation of Research problem. Research design: meaning of Research design, features of good research design , inductive, deductive, and development of models.

Hypothesis: Different types and significance, development of working Hypothesis, Null Hypothesis.

Unit II: - Review of Literature:

Meaning and Significance of review of literature, literature search procedure , sources of literature: primary and secondary sources, web source, critical literature review , Review Quality Instrument(RQI) .

Unit-III:- Data Collection And Analysis:

Data Collection Sources of data – primary, secondary and tertiary Types of data- categorical, nominal and ordinal methods of data collection: observations, field investigations, Direct studies: reports, record, or experimental observations.

Data analysis: graphical representation, descriptive analysis, inferential analysis, correction analysis and regression analysis. Measure of central tendency, measure of dispersion, measure of variation, Measure of central tendency vs measure of dispersion, normal distribution, measure of skewness and interpretation, purpose and use of chi-square test. Data analysis by using statistical software's: MATLAB, MINITAB and SPSS. Hypothesis Testing, generalization, interpretation and modeling.

Unit IV :- Scientific Writing And Ethics:

Scientific Writing: Structure and components of research paper and thesis writing. Different steps in the preparation: Layout, structure, language, illustrations, tables, citation styles and Bibliography.

Ethics: Ethical issue, Ethical committees, commercialization, copy right , royalty, intellectual property, rights and patent laws, plagiarism, citation, acknowledgement, Reproducibility and accountability

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Unit-V:- Computer Applications and Statistics:

Computer Applications Application of computer in research, M.S. Office and its applications. Internet and its applications: E-mail, www, Web browsing, acquiring technical skills, drawing inferences from data.

Statistics Introduction to Statistics - Probability Theories - Conditional Probability, Poisson distribution, Binomial Distribution and Properties of Normal Distributions, Estimates of Mean, mode, median and Proportions.

References:

1. Kothari, C.R.(2008). Research Methodology: Methods and Techniques. Second Edition New Age International Publishers, New Delhi.
2. Sinha, S.C. and Dhiman, A.,2002. Research Methodology, Ess Ess Publications.2 volumes.
3. Gupta S.P. (2008). Statistical Methods. 37th ed. (Rev)Sultan Chand and Sons.New Delhi. 1470 p.
4. Leon & Leon (2202). Internet for everyone, Vikas Publishing House.
5. Wadehra, B.L.2000. Law relating to patents, trade marks, copyright designs and geographical indications. Universal Law Publishing.
6. Research Methodology Dr PM Bulakh,Dr P. S. Patki and DrAS Chodhary 2010OPublished by Expert Trading Corporation Dahisar West, Mumbai 400068
7. Statistical method for Research works by fisher R.A. Cosmo publication, New Delhi ISBN : 81-307-0128-6
8. Design and analysis of experiments by montogomery D.C., john wiley ,ISBN: 0471260088
9. MINITAB online manual
10. Methodology of Research in Social Science by O.R. Krishnaswamy and Rangnatham, Himalaya Publication Hore, ISBN: 8184880936
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1 DECLARATION I hereby declare that the work presented in this thesis has been carried out by me under the supervision of my guide Dr. Jawed Ahmed KhanProfessor, Department of Zoology, Saifia Science College, Bhopal(M.P.) This thesis is my own unaided work and has not been previously submitted for any degree from any other University. Alka Singh
2 CONTENTS Page No. 1) Introduction and Historical Reviews 3 - 11 2) Materials and Methods 12 - 20 3) Observations 21 - 146 3.1. Description of Skull and Appendicular bones of five fishes. 3.2. Observations of morphomeristic Characters. 4) Discussions 147 - 160 5) Summary 161- 169 6) References 170 - 179 7) Journal of Ultra Scientist of Physical Science 180 – 182 8) Journal of Experimental Studies on the changes in the female gonad of immature and mature freshwater fish, Hetropneustes fossilis(Bloch) 183 - 185
3 CHAPTER – 1 Introduction & Historical Reviews
4 Introduction & Historical Reviews Aristotle (350 B.C) first of all defined the term taxonomy as the branch of an organism. The taxonomy owes its origin from the remote past in 1660 A.D. The systematic Zoology is mainly based on certain specific characters of an animal to put the proper nomenclature. Variations in the form of morphology are the main principle of classifying animals. The taxonomic positions and systematic studies of various fishes have been given long-back by Hamilton-Buchanon (1822). Day Fauna is another Systemic collection of various fishes describing the morphology and taxonomy of various species. Weber and Beaufort (1916), Sewentzoff (1926), Mukherjee and Ganguly (1950), Saxena (1969) described the skull of bony fishes correlate with habit and habitat. Chondar in his paper (1973, 75, 76) described that systemic zoology is mainly depending on the analysis of the variation in the morphology of an animal. This is quiet true in the case of fishes as well. Bhimachar (1933), Blame (1945), Harrington (1955), Nawar(1954), Ahmad(1951). Liem (1963), Ramaswami (1957), Chapman (1941), Mc Murrich (1884), Philips(1942), described the bony skull and anatomical review about catfishes and cyprinoid fishes, Chu.(1935), Hora and Nair(1940), also described two systemic
5 Characters, meristic and morphometric upon which the fishes have been classify in different groups. Morphology and systematic position of the fishes not only depend upon the morphological characters but also depend very much on the characters of their skeleton including the morphometric characters of the brain that is chondrocranium and other bony parts. The available records of the fish taxonomy and systematic are based mainly on external descriptions, and thus may not be taken always as very firm characters, morphological phenotypec variations in some species from different population may also sometimes be remarkable due to different zoo-geographical and eco-biological environment (lvlev, 1961). The occasional existence of the phenotypic differences in some characters of the species between two sepatate stocks or races may therefore, be not taken into consideration as very dependable identifying characters for a species classification. The osteological differences within and between the species may thus reconsidered as very possible authentic taxonomical features for the species and subspecies. Although enough work has been done on the bio-metry and morphology of the brain in relation to the habits of the fishes by Nawar(1954), Harrington (1955), Bhimachar(1933), Liem(1963), Ramaswani
6 (1957), Cope (1872), Gosline (1961), Ghosh, Bhattacharya, Rao(1968), Takahashi (1925), Balakrishnan(1965), Gupta(1970), Hardenberg(1956), Jayaram(1959), Natusi(u.d), Pillay(1952, 54,57),pillay and Ghosh(1962), Rao (1952), chapman(1944), Singh(1969), Alexander (1967), De Beer(1937), Marathe and Khosla(1958), Fowler(1911), Wu(1977), chen, chan chen (1981). About Weberian ossicles various scientists report their views like Watson(1939),. But the detail structure on the ostelogy of H. Molitrix, C. idella, P. Javanicus, L. rohita and W. attu have not been studied in detail to described the interrelationship of skeletal elements to the taxonomic position of the fish. The early references on the brain in fishes may be made to Holmgren (1922), who compared the brain of fishes with that of the insects and worms. These investigation was followed by Fritsch (1875) in fishes, Herrick (1891) in teleosts (1902) in Acipenser. The genotypically differentiation characters of a species from different stocks are accounted for different variety of species through mutation, DNA finger printing technique evolved recently have given some clue on the Oeteological details of a particular species (Sharma, 1995) The Chromosome number and their size of five test species under studies are not very much varing, though they are from

7 different gerera indication their origin begin very likely from the same stock of systematic tree, The entire body of a fish as of any other vertebrates is supported by a frame work of connective tissues which packs and binds various parts together and serves for the attachement of muscles. The most Obvious peculiarities of the fishes are their skeletal characteristics which have involved a change in structure of a skull. The skull in general may exhibit certain change in the otic and occipital region, orbital and ethmoid region of the fishes which is quiet true in the present study. Alekreye very recently (1994) have described the role of Heterochorny in the formation of morphological differences of large and small African barbs of family Cyprinidae. It is well known that in many instances animals that are subject to miniaturization have a juvenile paedomorphic morphology as a result of a shift in the time of onset of sexual maturity to early stages of development (Gould, 1977, Mc Namara 1986, Howes, (1981, 1987,) Gosline (1974), Yakubovski (1970), Mahy (1975). The study of the role of heterochorry in the divergence oflarge and small barbs is of in test both in connection with the problem of morphological evolution and with question on the confused systematic of the genus barbs and closely related genera. Essentially the only character that permits sufficiently clear diagnosis of the same size
8 specimens of two groups may be the striation of the scales as reported by Gorenwald (1958), Chondar (1976). The osteological differences within and between the species may thus be considered as very possible authentic taxonomical features for species and subspecies identification. Further, on the totality of the morphological & biological characters recorded by the various authors also have shown some clue regarding the identification of fishes. Starps as early as (1911) studied the osteology and relationship of carangids. Gregory (1933) and Suzuki (1963) have made taxonomical and anatomical studies on these fishes in Japan. The previous records on the descriptions of osteology and the combined treatment fishes under study is not fully worked out osteologically to give the taxonomic nomenclature. Sharma (1973) has made a successful attempt to the structure and the development of the brain in a teleosts fish Cirrhina mrigala and described in detail the Bio-statistics of brain with relation to the actual growth, absolute growth and relative growth. On the chondrocranium of fishes the studies are also available from Palmgren. (1921), Ohta (1959), and Smider (1950) who have studied the brain in four cyprinoid fishes.
9 The available literature revealed that though some work has been done on the brain and chondocranium but no serious attempt on the appendicular skeleton to describe the taxonomy have been made. The entire body of a fish as of any other vertebrate is supported by a frame work of connective tissue which packs and binds the attachment of muscles. The most obvious peculiarity of the Heterosomata as a hole and one which serves to distinguished them from other fishes in the presence of both the eye on one side of the head (right side in case of soleidae). This has obviously involved a change in structure of skull. As far as the skull in general is concerned, the otic and occipital regions have undergone comparatively little change, whereas orbital region has been greatly modified, the ethmoid region, apart from prefrontals, has undergone considerably less change than the interorbital. The anterior extension of dorsal fin over head is of considerable taxonomic value in its relation to eyes and nostrils Gregory, 1933) Chondar (1976) described the fishes of Ganga river system on the basis of two meristic (Dorsal fin-ray and radial bones) and three bony Characters such as dorsal aspect of skull, maxillary bone and ventral of operculum, of the countable
10 characters at little difference in the percentage composition of the unbranched rays and skull bones measurement was analysed by D2 method and conclude it that the two populations inhabiting in two different habitats have shown clear heterogenity in their skeleton. Kesteven (1950) described that different population of the same species of me fish are known to differ morphologically through genetic differences or Owing to differences in the ecological conditions. The genotypical differences of a species from a different stock is therefore accounted for different variety of a species or sub species: riginated through mutation. The pertaining literature reveals that much work has been done on the only brain of the fishes. In teleosts fishes Swarup (1956) in Ophiocephalus describe in detail the hypothalmo- and hyophysial complex where as Kallan (1950) in Lepidosteus. Ostelogical observations were also made recently by jain and Durve (1978) and Jain and Thakur in (1995) . They observed abnormality in body curvature and in the line due to the effects of anaesthesia and due to pollutants and impure quality of water in the natural habitat in the Cyprinidae fishes. In th present problem of research under studies five morphologically different but genotypically rather closely resembled carps, Hypophthalmicthys molitrix Ctenopharyngodon idella, Labeo rohita and Wallgo attu and P. javanicus are selected
11 in order to review their existing taxonomical divisions as well as systematic position through osteological characters. H. molitrix, C. idella and P. javanicus, all exotic to India and Labeo rohita Indian major carp and Wallgo attu from siluroids. H. molitrix, C. idella and P. javanicus are originally riverine in habitat, but subsequently established in confined waters through extensive culture. H. molitrix, an inhabitat of Amur basin of Russia, C. idella a native of China and Russia, prefer swift current of fresh water river but both of them are highly adaptable in moderate to wide range of hydrological conditions including temperature (4°C - 38°C) and salinity (4-8 ppt). P. javanicus, a native of Indonesian' fresh water river and having preference for or mild flow can also tolerate temperature (10-43°C) and (7-22 ppt) fairly large extent. A considerable difference is existed in the feeding habits of these five species. H. molitrix is a planktophagus correlating its feeding habits from Zoophyto-plankton from early to adult stages. C. idella is primarily a herbivorous accepting mostly small aquatic vegetation right from the advanced fry stage
12 CHAPTER – 2 Materials and Methods

13 Materials and Methods The specimens, irrespective of sexes, were collected from both the sources during the year 1992-93. In the research work five fishes, Hypohthalmicthys molitrix, Ctenopharyngodon idella and Puntius javanicus were collected from Naihati fish farm Calcutta, West Bengal because of their unavailability in Betwa river, Labeo rohita and Wallgo attu were collected from local Betwa river, with the help of local fisherman. After collection of fish, the standard length of the fish served as the model length. The actual number of specimens examined for various characteristic have been referred to in respective descriptions and tables. The linear measurements were recorded by a newly designed fish measuring apparatus (Chondar, 1975). Counting of lateral line scales, fin-rays, gill-rakers were made with the help of a magnifying glass and binocular dissecting microscope. The gill rakers of the upper and lower limbs of the left first gill were counted separately. All other counts and measurements were taken from and on the lefts side of the body. The ver tebral skeletons of formalin- preserved fishes were collectively prepared by adopting a new technique. Fishes were first punctured at several places of the body by a sharp needle and then kept for 3-7 times in hydrogen peroxide solution 2-5% concentration. The salutation got through the holes and are softened the inside muscles. The specimens were then boiled in the same solution for half-an hour to one hour until the flesh became disintegrated. The specimens were then taken one by one and placed on a table. Some deep longitudinal incisions were
14 given on the body muscles with a sharp scalpel or a Shaving blade very carefully so as to avoid damage. The cut muscles were removed in pieces with the help of a forcep and a needle. Most of the adhering muscles of the vertebral Column came out along with the muscle pieces, and the entire skeleton was cleaned and prepared within 3-5 minutes. The boiled specimen after being dried for a few days were also used conveniently for Skeleton preparation without further boiling. The dried specimens were kept in water for a day or so, and when the muscles became soft the Skeleton was prepared with the same procedure.
15 Alizarine Specimen preparation for Anatomial Studies. (1) In specimen adding 1- 4% KOH solution (Subject to size of the skull or specimen) till the skull or specimans become transparent. Changing of KOH solution is necessary regularly. (2) Add 2 to 4 drops of Alizarine solution in the KOH solution. After preserving the specimen in Alizarine solution in 3-4 months then preserved the specimen in glycerine for greater transparency. Preparation of Alizarine Solution Adding the Alizarine power in the 90% alcohol until the solution is saturated. (3) X-Ray Photographs prepartion: - Before taking X-Ray plate of the fish, all the live fishes are kept in formalin solution. Within 5-10 minutes the fishes were dead, Then the X-Ray photographs were taken. (4) Measurements of Different types of Skeleton: When th e specimens are completely dried insunlight, then the dried specimens were taken into Laboratory for measuring differentcharacters with the help of divider and fine thread. Counting of lateral linescales, Fin- rays. gill- rakers were made with the help of a magnifying glass and binocular dissecting microscope. The gill rakers of the upper and lower limbs of the left first gill we recounted separately. ln all the fourteen characters studied were total length, head length, Max. girth of skull,
16 Lateral line scales, Length of skull on its dorsal aspect, length of max. bone, length of ventral aspect of opercular bone, Length of ventral column, gillraker, haryngeal, teeth, Maxillary, teeth, vertebrae, fin rays etc . (5) Methods used for Analysing Bio- Statistical Data. a) Mean - One of the most important objectives of statistical analysis is to measure principal Characteristics, of a distribution, i.e to get one single Value that describes the Characteristics, of the entire mass of data. Such a value is called the central value or an average. The word average is very commonly used in day to day conversation, for example, we often talk of average boy in a class, average height, average income, average growth etc. In statistics term has a different meaning. It may de defined as " That value of distribution which is considered as the most representative or typical value for a group. Since an average represents the entire data, its value lies somewhat in between two extremes, i.e the largest and smallest items. b) Mode - The observation which occurs more often than others is called Mode. For a given data, the mode of the series 4,9,3,7,1 ,2,9 would be 9, Since thirds value occurs more frequently than any of the others. c) Standard Deviation: - The most useful measure of dispersion is the standard deviation or rootmean square deviation or Mean error. It measures the absolute dispersion or variability of a distribution. It is defined as the positive square root of the arithmetic mean of the squares of the deviations given observation from their arithmetic mean.

17 It provides accurate result. In this method the drawback of ignoring the algebraic sign (in mean deviation) is overcome by taking the squares of deviations as there by making all the deviations as positive. A small standard deviation Means a higher degree of uniformity of the observations as well as homogeneity of a series and vice-versa. Thus it is extremely useful in judging the repetitiveness of the mean. d) Correlation analysis: - The statistical methods that have been discussed so far were concerned with the description and analysis of single variable. For example, weight, growth, height etc, this type of analysis is called univariate analysis. If we study the relationship of two variables, it is called bivariate analysis. In analysing .data for the biological sciences and in practice, we find that it is frequently desired to learn something about the relationship between two or more variables. We may for example, be interested in studying the relationship between blood pressure and age, the consumption level of some nutrient and weight gain, fertilizer applications and yield, size of crop and percentage of worms etc., correlation analysis is concerned with measuring the strength or degree of relationship between variables. The measure of correlation is called the correlation co-efficient which is summarised in one figure, the direction and degree of correlation. The correlation measures the closeness of the relationship between variables. Correlation is the numerical measurement showing the degree of correlation between two variables. One variable may be cal l ed independent and the other is dependent variable. The correlation analysis includes: 1) Determining whether a relation exists and if it does, measuring it.

18 2) Testing whether it is significant and. 3) Establishing the cause and effect relationship, If any. Applied Method of Correlation: The formula is r = ∑(xy) NÓxÓy Where x = (x-x̄),; Y = (y-ȳ); Óx = Standard deviation of X series. Óy = Standard deviation of Y series. N= Number of pairs of observation. Another formula is: = ∑ ∑ 2 ∑ 2 Where X = (X-X¯); Y = (Y-Y¯); These above said formulae can be used only where deviations are taken from actual means and not from assumed means. e) Analysis of Variance: - Statistical method may be regarded as the body of techniques for the study of variation in nature. This is developed systematic procedure for the analysis of variation. Analysis of variance consists of Classifying and cross Classifying statistical results and testing whether the means of specific. Classification differ significantly. For example, five fertilizers are applied to four plots each of paddy on each of these plots. We may be interested in finding out whether the effect of these fertilizers on the yields are significantly different. To find out answer to

19 this problem, we make use of analysis of variance. It enables us to analyse the total variation into components which may be attributed to various 'Sources' or 'causes'. It can provide us with meaningful comparisons of sample data which are Classified according two or more variables. Applied Method Calculate the ratio F = – h – Compare the calculated value of 'F' with the table value of 'F' for the degree of freedom at certain Critical level. If the calculated value, of 'F is greater than the tab value it is concluded that the difference in sample means is significant. On the other hand, if the calculated value of 'F' is less than table value, the difference is not significant and has arisen due to fluctuations of simple sampling. To summarize calculations of sums of squares, together with their numbers of degrees of freedom and mean squares in a table is called analysis of variance table.

20 Sources of Variation Sum of Squares Degree of Freedom Mean square F Between Samples . . . V1= C-1 Sum of Sq. Within Samples C - 1 Mean Sq. bet. Columns With in . . . Samples V2 = n - c Sum of Sq. Mean Sq n - c within Samples Total n - 1

21 CHAPTER – 3 Observations 3.1 Description of Skull and Appendicular bones of fives fishes 3.2 Observations of morphomeristic Characters

22 Observations 3.1 Description of skulls and Appendicular bones of five fishes Systematic Position and General features Wallgo attu Phylum - Vertebrata Subphylum - Craniata Super Class - Gnathostomata Series - Pisces Class - Teleostomi Subclass -Actinopterygii Super Order - Osteriophysi Order - Siluriformes Family -Siluridae Genus - Wallago Species - attu Distinguishing Characters D5; A iii 74-93, PI - 13-15, Vi 7-9 (1) Width of head equal to its length behind the middle of the orbit. (2) Snout is produced, the cleft of mouth extending to one diameter behind the orbit. (3) Lower jaw is slightly longer than the upper jaw. (4) The mandibular pair is as long as the snout. Distribution - Fresh waters of the India, Pakistan, Srilanka, Burma and China.

23 Habitat - It is found in river water. W. attu is carnivorous and predatory in nature. I. Description A. Skull of Wallago attu The skull of W. attu is well formed and is composed of both replacing and investing bones. l Neurocranium 1. 1 Occipital region The occipital region consists of four replacing bones, the supraoccipital on the roof, two exoccipitals on the sides and basioccipital on the floor. The four bones enclose at the posterior end of the region a prominent opening, the foramen magnum. The supraoccipital (Fig.KTP) is a flat bone, which slopes from its middle both forward and backward. A median longitudinal cleft at its front end forms the back half of the posterior fontanelle. The exoccipital (Fig. k, TP) is a small irregular bone. From its dorsal side arises a thin laterally compressed neural plate, which meet the supraocipital. The neural plate gives off a horizontal plate towards the inner side and an inclined plate towards the outer side. The horizontal plate is directed inwards and meet a similar plate from the other exoccipital and with other plate forms a plate form on which rests the medulla oblongata. The inclined plate lean backwards and join the supraoccipital and epiotic.

24 The basicccipital Fig. TP) is a flat bone along its upper surface and its lower surface is produced into a ridge. At its posterior end lies on occipital condyle in the form of a concave facet. Below the condyle are two backwardly directed accessory articular Processes, round the vertebral and lateral sides of bone, is a semicircular ridge and and behind this ridge on either side, is a depression for insertion of the inferior limb of postemporal on its side. 1 .2 Orbital region The orbital region consists of the orbits and orbital bones. The orbits are large, each bounded infront by the lateral ethmoid, on inner side by the lateral ethmoid and sphenotic and behind by the sphenotic. The orbital bones (Fig. K, TP) are the four suborbitals and lacrymal, which lie embeded in the superficial muscles and extend in a chain below and infront of the eye. The first suborbital is a splint. like curved bone that runs from thesphenotic to the posterior boundary of eye. The second suborbital is small triangular piece, which lies partly over the third suborbital on posterior boundary of the eye. The third suborbital is a stout bone, long curved and flattened at its two ends. It articulates by its prominent head with the lateral ethmoid and extend behind beyond the second suborbital where it joins the quadrate angular at the angle of mouth. The lacrymal (Fig. K) is a small trianglar bone, which lies infront of the fourth suborbital over the base of maxilla. The infraorbital trunk penetrates and terminates in the lacrymal.

25 1 .3 Auditory region Each auditory region, which lies on the posteriolateral side of cranium, is ossified and is made up of four bones, the prootic, epiotic, sphenotic and pterotic. The opisthotic is absent in Wallago. All the bones of this region are replacing bones. The prootic (Fig K, TP) is a flat squarish bone on ventral side of the auditory region. It is produced behind into a short backwardly directed process. From about the middle of upper surface of the bone arises a plate like process, which marks the anterior limit of the recess of membranous labyrinth. The epiotic (Fig. TP) is situated at the posterior end of auditory region. It is spatulate in form. A vacuity, which lodges a part of the posterior vertical canal of internal ear lies in its anterior region and divide it at this end in to a dorsal and a ventral lamella. The pterotic (Fig. TP) is a larger bone and it lies along the outer boundary of audiory region. It is produced behind into the pterotic process which runs on outer side of the epiotic and unites with it. Along the inner side of bone is a beep groove on which lies a part of the horizontal canal of internal ear. The sphenotic (Fig. TP) marks the anterior boundary of auditory region and the posterior limit of the orbit. It consists of the much thickened main part and a forwardly directed flattened process. The main part has a vacuity on its inner side, which lodges the acoustic on its inner side, which lodges the acoustic tubercle of brain. On its vertral side is a longitudinally directed groove, which in continuation with the groove on pterotic, gives articulation to the hyomandibula bone.

26 1 .4 Sphenoidal region The sphenoidal region comprises the frontals, pleuro sphenoids, orbit sphenoid and basisphenoid. On vertral side of the sphenoidal region is a large sphenoid. The parietals are absent and the basis phenoids, orbito sphenoid and basisphenoid is reduced in Wallago. The pleurosphenoid, orbitosphenoid and basisphenoid are replacing bones, while the frontals and parasphenoid are investing ones. The frontal (Fig. W) is a larger flat bone on dorsal side in its half of the region. On dorsal side of frontal runs an oblique ridge, along inner side of which lies the supra orbital canal of lateral line system. Its inner margin drops sharply down and articulates with pleurosphenoid and orbitosphenoid. The pleurosphenoid (Fig. TP) is a small irregular bone, one on either side of the sphenoidal region. With the sphenotic of its side it marks the posterior boundary of orbit. It is composed of a thickened body and a forwardly directed process. The orbitosphenoid (Fig. TP) is a median bone in the frontal segment of cranium, formed by fusion of the paired ossifications. The compound bone is dumbel - shaped, narrow in the middle and broad at the two ends and it is hollow like a drain pipe. The basisphenoid is a small rhomboidal bone on dorasl side of the parasphenoid. It lies party over the body and partly on the arm of parasphenoid and is intimately fused with it. The parasphenoid (Fig. TP) is a long bone on ventral side of the sphenoidal region. It consists of the rhomboidal body and long forwardly directed arm. The body is elongated in an anterio posterior direction.

27 Its upper surface is more or less flat, while the lower surface is produced into a median ridge. 1 .4 Ethmoidal region The ethmoidai region is composed of the ethmoid and lateral ethmoids developed in relation with the snout and the nasals and prevomer formed in the region of nostrils. The ethmoid (Fig. 0) is a flat plate like bone, situated on the dorsal side of ethmoidal region. It is deeply notched medially infront and its antero-lateral ends are produced into backwardly directed processes, the dorsal horns. The ethmoid gets separated behind into a dorsal and a ventral plate. The space between the two plates is divided by a longitudinal septum into the right and left cavities, which form the anterior ends of olfactory capsules. The lateral ethmoid (Fig. 0) is a hammer-shaped prominent bone in its half of the ethmiodal region on the side of the ethmoid and frontal. The shaft of hammer runs back on the outer - side of the frontal and gets connected behind to the sphenotic. The inner head of hammer, which is broad and rounded is overlapped by the ethmoid and frontal. The pre vomer (Fig. 0) lies on ventral side of the ethmoidal region. It is a large bone, which consists of the rhomboidal body and backwardly directed stem. The nasal (Fig. 0) is a splint-like tubular bone, developed in relation with the olfactory capsule of its side. It lies along the outer margin of ethmoid embedded in the connective tissue.

28 2. Branchiocranium 2.1 Oromandibular region The oromandibular region is well developed and it forms the upper and lower jaws. Each half of

threeninvesting bones, the ectopterygoid, premaxilla and maxilla. The palatine is a small flat bone, which lies on the innerside of maxilla. It joins by its front end with the maxilla and by its hind end it is attached to the lateral ethmoid by the muscles and connective tissues. The ectopterygoid is a small bone that articulates infront with the prevomer above the vomerine process and behind with the metapterygoid. The metapterygoid (Fig. 0) is a prominent bone, which bears infront a notch for the ectopterygoid. Posteriorly its inner half articulates with the hyomandibula, while the outer half extends back and meet the quadrate and hyomandibula. The premaxilla (Fig. 0) is a stout bone that forms the upper margin of the gape of mouth. The maxilla (Fig. 0) is a poorly developed bone and it lies on the upper side of premaxilla. The angular (Fig. 0) is an elongated curved bone, developed around the posterior one third of Meckel's cartilage. The dentary (Fig. 0) is a long and curved bone developed along the anterior two third of Meckel's cartilapeit meetinfront in a symphysis

29 with that of the other side and behind it terminates in a fork, whick lies on outer side of the angular. 2.2 Opercular bones Operculum is formed of three bones, the opercular, interopercular and preopercular. The subopercular is absent. The opercular (Fig. 0) is a scute-like triangular bone, which hangs with its apex from the hyomandibula. Its upper surface is marked with radiating ridges, which commence from its apex. The interopercular (Fig. 0) is a small scute like bone on inner side of the opercular overlapped by it. The preopercular (Fig. 0) is an elogated curved bone; its posterior margin is thickened and canaliculized for passage of the operculomandibular for passage of the operculomandibular cannal of lateral -line System. A small tubular bone lies in the cartilage between the pterotic and the preopercular, through which passes the operculomandibular canal in its course to the lower jaw. 2.3 Hyobranchial Skeleton The hyobranchial skeleton comprises the hyoid arch series and the branchial arches. Each half of the hyoid arch consists of the hyomandibula and hyoid cornu. The hyomandi bula is a prominent flattened bone, distinguished infront into a dorsal and a vertral lamella. On inner side it glides by a long head in the groove on the spenotic and pterotic. The hyoid cornu hangs from the hyomandibula by a small rodlime interhyal, which lies on innerside of the preopercular.

30 The epihyal is a triangular bone, which lies on ventral side of the head along the anterior edge of gill cavity. The ceratohyal is large, being twice as long as the epihyal. It runs forwards and inwards from the epihyal along the anterior edge of branchial cavity. The hypohyals are two small triangular bones which lie in the sameline, one behind the other. The anterior hypohyal is attached by its base with the similar hypohyal from the other side and by its apex to its ceratohyal. ¦• Each half of the branchial arch is ossified by the pharyngobranchial and epibranachial in the upper part and the ceratobranchial and hypobranchial in the lower part. The pharynogobranchials are small rod like bones, which lie obliquely in the dorsal wall of pharynx. The epibranchials are elongated curved bones, which are grooved on the upper surface. The ceratobranchials are long curved bones, more than twice as long as the epibranchials. The fifth ceratobranchial is expanded in its greater part into a plate like structure which bears the fine inferior pharyngeal teeth. The hypobranchials are four. The first and second hypobranchials are ossified and third and fourth are cartilaginous. The basibranchials are usually two in the form of rods which ossify in the median cartilaginous copula of Chondrocranium, one behind the other.

31 B. Vertebral Column (Fig. N) The vertebral column consists of about 70-73 vertebrae and is distinguished into the anterior trunk and posterior caudal region. Trunk region The trunk region includes about sixteen vertebrae, of which the anterior five are fused and the remaining eleven are free. A typical vertebra (Fig. N) of this region has an amphicoelous centrum, each face of the centrum being deeply concave. The first five vertebrae (Fig. N) are greatly modified. The first vertebra has the centrum, which is convex infront and concave behind wedged between the basioccipital and complex vertebra. Caudal region The caudal region (Fig. N) has about 57 Vertebrae. A typical caudal vertebra like the trunk vertebra, consists of the deeply biconcave centrum with the median dorsal, median ventral and paired dorso-lateral, and paired ventro-lateral grooves. The neural arch and zygapohyses are precisely similar to those of the trunk Vertebra, but the neural spine is long. C. Appendicular Skeleton The appendicular skeleton comprises the pectoral and pelvic girdles together with their fins. 1. Pectoral girdle and fins. The pectoral girdle (Fig. A) lies behind the branchial cavity and is formed of two symmetrical halves, each distinguished into an endoskeletal primary part and a dermal secondary part. The primary part

32 of pectoral girdle is very much reduced and is closely applied to the dorsal side of secondary part. It is formed of the scapula, coracoid, and mesocoracoid. The secondary part is very well developed and consists of the cleithrum and posttemporal. The pectoral fin consists of 13-15 rays, and consists of spine. 2. Pelvic girdle and fins • The pelvic girdle (Fig. B) consists of a pair of pelvic bones, which lie in the remains of the cartilage, one on either side of the anus and preurocopulatory papilla. The pelivic fin consists of 6-7 rays. 3. Median fins. The median fins include the dorsal, anal and the caudal fins and their Skeleton consists of radial and finrays. Dorsal fin: The dorsal fin (Fig. N) is poorly developed, and consists of four dagger shaped proximal radials fused with one another, except at their pieces, which are placed in between the neural spines of trunk vertebrae. Anal fin: The anal fin of (Fig. N) consists of 83-91 rays, which are supported by their radials on the first fifty-one caudal Vertebrae. The radials comprise three segments. The proximal segment is long and spine like and is directed downwards and backwards. Its apex lies in between the haemal spines of the two adjoining caudal vertebrae and its thickened, distal end bears four depressions, three on the anterior face and one on the posterior face.
33 Caudal fin The caudal fin (Fig. N) is vertically expanded and is supported by laterally flattened rods on the dorsal and vetral sides of urostyle. On the dorsal side of urostyle there is only one free radial, while the rest of the fin, is formed of the urostyle and nine hypourals. D. Ribs. A Series of paired ribs are attached to the distal end of parapophyses of the trunk vertebrae. There are eleven pairs of ribs, a pair in relation with each of the trunk vertebrae except the first five vertebrae.
34 Explanation of Test Figure K Fig. K- Wallago attu Dorsal View of Skull key to Words AN - Angular ANF - Anterior fontanelle DE - Dentary EP - Epiotic ET - Ethmoid EX - Exoccipital FR - Frontal HY - Hyomandibula INOP - Inter opercular LA - Lat. Ethmoid LAC - Lacrymal MAT - Mand. Teeth MAX - Maxilla MET - Metapterygoid NA - Nasal OP - Opercular PAL - Palatine PE - Preopercular PF - Post Fontanelle PM - Premaxilla PT - Posttemporal PT - Pterotic QU - Qudrate SPH - Sphenotic SUB .1 - Suborbitall SUB.2 - Suborbital 2 SUB-3 - Suborbital -3 SUB-3 - Suborbital -4 SUP - Supraoccipital TR - Tripus VER 1 - Vertebra 1 VERC - Vertebra Complex
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37 Explanation of Test Figure - TP (Disarticulated bones from Skull) key to Words. AC. AR - ACC. ART PORCESS AN - ANT PART ANT - ANT FONTAN BA - BASISPHEN BO - BODY CAV. SIN - CAV SIN IMPARIS CR - CREST DOLA - DORSAL LAMELLA GR - GROOVE HOPL - HORIZ PLATE INPL - INC. PLATE NEPL - NEUR PLATE PA - PART PO - POST PR - PROCESS PTPR - PTER. PROCESS RI - RIDGE VELA - VENTRAL LAMELLA A- Supra occipital; B - Exo occiptial; C-Basi occipital; D - Prootic; E- Epiotic; F - Pterotic; G - Sphenotic; H - Frontal; I- Pleurosphenoid; J - Orbitosphenoid; K- Parasphenoid with basisphenoid; L - First suborbital; M - Second suborbital; N - Third suborbital; O - Fourth suborbital G - Part of anal fin. H - Dorsal fin. I - Caudal fin
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39 Explanation of Test Figure - O Fig. O - Disarticulated bones from skull - of W. attu key to words; AN. F - Ant. fontan AR - Arm AR. OP - Art. Surf opercular BO - Body CON - condyle DO.H - Dorsal Horn DORLA - Dorsal lamella FAC - Facet FOM - Foramen GRE - Groove HD - Head IN.H - Inner Head OU.H - Outer Head PLA - Plate PO - Post Process PRM - Pre. Maxillary teeth SH - Shaft SP - Spine SPI - Spine ST - STEM VE.LA - Ventral Lamella VEN - Ventral Horn VENLA - Ventral lamella VO. PR - Vom. Proc. VOM.T - Vom. teeth A. Ethmoid, B.Lateral ethmoid C.Prevomer, D.Nasal, E.Lacrymal, F. Metapterygoid, G. Quadrate H. Maxilla I. Premaxilla, J. Angular K.Dentary, L.Hyomandibula, M. Interopercular N.Opercular O.Preopercular
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41 Explanation of st Figure - N Fig. N - Vertebrae and median fins of W attu key to words AC. P - Acc. Art. Process AND - Ant. Division AZ - Ant. Zygaparapo AZ - Ant. Zygapo CAU - Caudal CM - Centrum CR - Crest DG - Dorsalic Groove DI.R - Dist. Radial FNR - Fin Rays HAE - Haemal HYP - Hypurals MES - Mes. Radial NA - Neural Arch NS - Neural Spine NS - Neural Spine PAO - Parapo PDDP - Post. Division Dorsal Process PR. RA - Prox. Radial PZ - Post Zygar RA - Radial RB - Rib SG - Spine Groove TRI - Tripus URO - Urostyle V V1TH - Vertebra VI th VET - Vertebra VLG - Ventro Lat. Groove VTH - Vertebra V th A- Complex Vetebra B - Anterior view of trunk vertebra C - Side View of some trunk vertebrae; D - Side View of some caudal vertebrae; E - Anterior view of caudal vertebra; F - Anterior view of first caudal vertebra
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43 Explaination of Test Fig A, B Fig. A, B Girdles and Paired fins.: A and pectoral fins, B. Pelvic girdle and pelvic fins. key to words; AN. P - Ant. Process CAR - Cartilage CLE - Cleithrum DO. L - Dorsal limb FR - Fin Ray FR - Fin Ray IN .1 - Inter Radial Ist IN. P - Inner process INF. P - INF. Process INT.2 - Interradial 2nd INT.3 - interradial 3rd LV - Ventral limb MES - Mesocoracoid MI - Middle Process MP - Main part OP - Outer process PE. B - Pelvic bone PO.TE - Post temporal R-3 - Radial 3rd RA. I - Radial 1st RA.2 - Radial 2nd SC - Scapula SP - Spine SUP - SUP process SUP.B - Supernumery Bone Fig - A. Pectoral girdle and pectoral fin of W. attu Fig - B. Pelvic girdle and pelvic fin of W. attu
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45 Systematic position and general feature, Labeo rohita Phylum - Vertebrata Subphylum - Craniata Super - Gnathostomata Series - Pisces Class - Teleostomi Subclass - Actinopterygii Super order - Osteriophysi Order - Cyprinidae Genus - Labeo Species rohita SC. Name -Labeo rohita. Distinguishing Characters D iii 7; A ii-iii 12 - 14; Pi 17; V i 7 (1) Dorsal profile more convex than that of the abdomen. (2) Snout obtuse and projects beyond the jaws. (3) Lips very thick and fringed with a distinct inner fold. (4) Vertral fin is inserted below the third and fourth dorsal ray. (5) Caudal fin is deeply forked. Distribution - Freshwaters of Northern Indian, Paskistan and Burma. Habitat - Labeo rohita adapted both in river water and pondwater. Coldwater causes unfavourable to them. I. Description A. Skull - Labeo rohita
46 The Skull of Labeo rohita is well formed and is composed of both the replacing and investing bones. The cranial bones are hard. I. Neurocranium 1.1 Olfactory region The olfactory region is constituted by prevomer, mesethmoid, lateral ethmoids, lacrymals and nasals (Fig. ST) The lateral ethmoid is a quadrilateral bone with a pair of extensions, one directed backward and the other forward, the formaca joins the frontal by extending to its Ventral side. The bone which contributes partly to the formation of the nasal capsule bears an aperture for the penetration of the olfactory nerve. The prevomer is broad anteriorly; the pointed posterior part runs back below the junction of the lateral ethmoids to join the parasphenoid. The space enclosed by the prevomer and mesethmoid is filled with a cartilagewhich has a triangular head. The lacrymals are thick, angular and are attached by ligaments to the lateral ethmoids. 1 .2 Orbital region There is a pair of large, (Fig. ST) rectangular bone, each articulating anteriorly with the frontal, laterally with the pterotic and posteriorly with the Supra-occipital and epiotic bones. Paired frontals are situated in front of the parietals and are large, flat bones forming the roof of the cranium. Anteriorly, the frontals extend upto the ethmoids. Laterally, the frontals articulate with thesupra-orbital and the sphenotic bones. The parasphnoid
extends from the basi-occipital to the -vomers in front. The alisphenoids,4 is a pair of
47 irregular bone. The orbito -sphenoids lie infront of the alisphenoid and form the floor as well as the middle part of the inner wall of the orbit. Each orbit is bounded dorsally by the frontals, ventrally by the ali and orbito-sphenoids, anteriorly by the ectoethmoid and posteriorly by the sphenotics. Besides these, five small bones surround the orbit and form the orbital ring. Of these the supra-orbital and post frontal are present on the dorsal side, the pre-orbital lies along the antero-ventral border and the postorbital lies along the posterio-ventral border. All the bones of the orbital ring are dermal bones. In the skull of Labeo, the cranial cavity extends between the two orbits upto the ethmoidal region and there is no vertical interorbital septum. This type of skull is called platybasic. 1 .3 Auditory region Each auditory region, which lies on the posteriolateral side of cranium, is ossified and is made up of four bones, the prootic, epiotic, sphenotic and pterotic. and opisthotic bones. In Labeo, the opisthotic is absent and the remaining four bones form a compact structure looking like an inverted cup, one on each side of the hinder region
Portions of the three semi-circular canals and the ampullae of the internal ear are embedded . in it.
and the pterotic forms its outer wall. Part of the semi-circular canal of the membranous labyrinth are embedded in the both these bones. The sphenotic is the anterior most bone of the auditory capsule and bears a groove for the articulation of the hyomandibular.
48 1 .4 Occipital region This region forms the posterior part of the skull and has a small median opening called the foramen magnum through which the spinal cord is continued into the brain. This region is composed of three replacing bones, (Fig. ST) a supra-occipital, basi-occipital and paired ex- coccipital. The supra-occipital, forms the roof of the cranium in its hinder part and extend posteriorly to form the occipital spine. In Labeo, this bone does not take part in forming the foramen magnum. The ex- occiptals are larger bones
The basi-occipital is a larger bone situated on the ventral side and forms the posterior part of the floor of the skull. It bears the occipital condyle to articulate with the vertebral column. 2. Branchiocranium 2.1 Oromandibular region The oromandibular region (Fig. WS) includes bones forming the jaws and suspensorium. The region consists of hyomandibularis, metapterygoids, quadrates, symplectics, ectopterygoids, endopterygoids, palatines, maxillae and premaxillae. The lower jaw consists of articular, angular and dentary. In Labeo rohita, the premaxilla is a thick curved bone which meet
skull. In its inner surface it is concave and outer convex and the bone is partly overlapped by maxilla. It is freely movable during life and is edentulous. The maxilla of this fish is also a thick curved,
49 edentulous bone of irregular to premaxilla. It is produced into two processes for attachment with premaxilla. The palatine is an elongated bone, wider at both the ends and narrower in the middle. Anteriorly,
behind the palatine. It has a number of vacuities.
and has a vertral condylar process for the articulation of the lower jaw. A well defined ridge runs obliquely backwards from the condyle. Posteriorly it articulates with the symplectic. (Fig.WS) The dentary of the lower jaw is a large hammer shaped bone, joins with its fellow of the opposite side by connective tissue. It articulates with the angular at its lower end, and with maxilla and premaxilla on the dorso-lateral side (Fig. WS) 2.2 Opercular region The opercular bones (Fig. KP) connected with the hyoid arch
sub-opercular and the inter opercular, bones. A few
ceratohyals. In the opercular series, the opercular is

50 the largest and most prominent bone. It is slightly concave on the inner surface and is partly overlapped by the preopercular bone. Its dorsal edge is firmly attached to the pterotic of the skull by mean of ligaments and the ventral border is bound to the subopercular. A facet for articulaton with the hyomandibular is present on the inner side of the opercle. In front of the opercular is the preopercular bone. It is a large crescent shaped bony piece and articulates anteriorly with the quadrate and postero-dorsally with the hyomandibular, and vertrally with the opercular. Its upper triangular corner fits into the hyomandibular. The subopercular is also an elongated sabre shaped bone which lies below and internal to the opercular. The inter-opercular is a long stout bone, which lies all along the ventral border of preopercular bone. It is attached with the angular at the anterior hd with the opercular and subopercular bones at the hind end. 2.3 Hyobranchial Skeleton. The hyoid arch is divisible into two parts a) Dorsally, the hyomandibular, consisting of two replacing bones the hyomandibular and the symplectic, b) Ventrally, the hyoid cornu, formed of a pair of ventro-lateral arms are joined to a middle piece, basihyal. Each lateral arm consists of four segments: hypohyal, ceratohyal, epihyal and interhyal. The hyomandibular is a strong, elongated bone lying in an obliquely vertical position between the auditory capsule above and preoperculum below. It bears two articular facets on its border for attachment with the skull.
51 Five pairs of branchial arches are present of which first four bear gill lamellae but the fifth is devoid cleithrum and is modified for mastication of food. Each branchial arch typically consists of paired pharyngobranchials, epibranchials, ceratobranchials, hypobranchials and a median unpaired basi-branchial. B. Vertebral Column The vertebral column is completely ossified and consists of a varying number of amphicoelous vertebrae. Trunk region It cosists of (Fig. E, F) a deeply biconcave centrum with a prominent depression on its dorsal and another on its ventral surface. The neural arch is formed by a pair of processes arising from the antero- lateral border of the dorsal depression and encloses the spinal cord. The neural arch extends dorsally into a backwardly directed neural spine which is more pronounced in the posterior trunk Vertebrae, but smaller and reduced in the anterior region. Caudal Region A typical caudal vertebra has a well developed biconcave centrum with a median depression on the dorsal, ventral and lateral sides. It has a (Fig. G) well developed neural arch produced above into a long backwardly directed neural spine. Pre and post Zygapophyses are present as in the trunk vertebrae. C. Appendicular Skeleton
52 The appendicular skeleton comprises the pectoral and pelvic girdles together with their fins. 1. Pectoral girdle and Fins. The pectoral girdle (Fig. P) is composed of both replacing and dermal bones. The replacing bones form the primary girdle, each half of which consists of scapula, coracoid and a mesocoracoid. The halves of the primary girdle do not meet in the middle line. The secondary girdle is formed of dermal bones which starting from the dorsal end, are post- temporal, supra- cleithrum, eleithrum and the post cleithrum. The pectoral fins consist of 17 rays. 2. Pelvic girdles and fins. The pelvic girdle is represented, by a pelvic bone lying in the ventral body wall. It is a (Fig. Q) replacing bone and is frormed by ossification in the original cartilaginous girdle. A small cartilaginous rod is attached to the hind end of the pelvic bo ne and represents the Original Girdle. The pelvic bone consists of two parts, an anterior forked portion which bears
and is continued behind into the cartilage. The pelvic fins consist of 17-18 rays. 3. Median fins The median fins include the dorsal, anal and the caudal fins and their skeleton which consists of radiials and fin rays. Dorsal fin
53 The dorsal fin (Fig. KB) consists of 12-14 rays, which are supported by the vertebrae. The distal first radial articulates with the neural spine. Each radial shows two processes arising from the proximal and distal parts. Anal fin It consists of (Fig. KB) 5-7 rays, which are supported by the vertebrae. The distal parts of each radial is applied to the haemal spine of the corresponding caudal vertebrae. Caudal fin It consists of (Fig. G) 19 rays, associated with the last caudal vertebrae. The last three to five vertebrae are modified to give support to the caudal fin. The urostyle has a deep groove along its ventral surface. The neural and haemal spines of posterior caudal vertebrae are fused with the fin radials to form epiurals and hypurals respectively. These support the caudal fin. D. Ribs: A series of paired segmentally arranged bony rods are attached to the distal ends of the parapophyses of the trunk vertebrae and are called the pleural ribs. The proximal end of each rib is ditated while its distal end is slenderer and pointed.
54 Explanation of Tèst Figure - ST Fig. ST - Skull of Labeo rohita (Dorsal view) key to words; ECD - Ectethmoid EPO L - Ex. occipital ETC - Epiotic FL - Frontal FN - Foramen FOR - Pre-opercular HYU - Hyomandibular INO - Infra orbital LCL - Lacrymal MHD - Mesethmoid MX - Maxilla NL - Nasal NSL - Nostril OCS - Occipital Spine OL - orbital OPR - Opercular PAL - Parietal PFL - Post frontal PMX - Premaxilla POL - Post orbital PRO - Pre- orbital PTC - Pterotic RL - Rostral SPL - Supra temporal SPOL - Supra occipital
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56 Explaination of test figure KB And WS Fig. KB - Radial and Dermal Ray (A) Front View (B) Lateral view (Cyprinid Fishes) Fig - WS - Side View, Skull of Cyprinid Fishes Key to words; AGR - Angular ALR - Articular BOL - Basi-occipital DSPC - Distal piece DY - Dentary EDYD - Endopterygoid EOL - Ex-occipital EP - Epiotic FL - Frontal FOL - Pre-orbital HYLR - Hyomandibular IAOL - Infra orbital IRP - Inter-opercular L.DIA - Lepidotrichia LCL - Lacrymal MDP - Middle piece MPGD - Metapterygoid MSD - Mesethmoid MX - Maxilla OCSP - Occipital Spine OPR - Opercular PC - Pterotic PFL - Post frontal PMX - Premaxilla POL - Post orbital POLR - Pre-opercular PRPE - Posterior piece PTL - Parietal QT - Quadrate SOPR - Sub-opercular SPO - Sup.orbital SPTL - Supra-temporal
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58 Explanation of Test Figure - WV And KP Fig. WV - Operculum of Cyprinid fish Fig. KP Bones of Operculum of Cyprinid fish key to Words. ARF - Articulating facet INPR - Inter Opercular IPM - Interoperculum OPM - Operculum OPR - Opercular PAM - Preoperculum POR - Pre. Opercular SBM - Suboperculum SBR - Sub. Opercular
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60 Explanation of Test Figure - E, F and G Fig. E- Complex Vetebra of a Catfish Fig. F - Pre Caudal And Caudal Vertebra of Cyprinid fish Fig G - Skeleton of the Caudal fish key to Words. CEN - Centrum CEN - Centrum EPI - Epiural HACA - Haemal canal HAES - Haemal Spine HAMH - Haemal Arch HAR.AR - Haemal Arch HY - Hypurals NE SP - Neural Spine NEAR - Neural Arch NES - Neural Spine NES - Neural Spire PORP - Postero ventral process POZG - Postzygapophysis TP. 3+4 - Transverse process of vertebrace 3+4 TP.2 - Transverse process of vertebrace 2 TRI - Tripus URO - Uroneural UROE - Urostyle VE. P - Ventral Process
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62 Explanation of test figure - P and Q Fig. P. Pectoral girdle and fins of cyprinid fishes Fig. P. Pelvic girdle and fins of cyprinid fishes Key to words; P.TEM - Post temporal SU.CLE - Supra cleithrum CLE - Cleithrum ME.CO - Meso coracoid COR - Coracoid RA - Radials FN - Fin Rays SCA - Scapula P.CLE - Pelvic Bone CAR - Cartilage
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64 Systematic Position and General feature Puntius javanicus Bleeker (1855) Phylum - Vertebrata Subphylum - Craniata Super class - Gnathostomata Seriers - Pisces Class - Teleostomi Subclass - Actinopterygii Super order - Osteriophysi Order - Cypriniformes Family - Cyprinidae Genus - Puntius Species - javanicus Distinguishing Characters: - D 4 .8; A. 3 .6; P1 .14-15; V.1 .8; 1) Body strongly compessed, elevated, dorsal prosal profile arched, often concave above the occiput. 2) Snout pointed, mouth terminal. 3) Dorsal emarginate, its fourth ossious spine head, its stiff portion not much shorter than head. 4) Pectorals not much shorter than head. Distribution: - The tawes (P. javanicus) has natural distribution in Indonesia, Thailand, Vietnam, Sumatra. Its orignial home in Indonesia. Habitat: - A freshwater riverine habitat the tawes has been well established in lakes and ponds, and is also found to thrive in low saline brackishwater.
65 I. Description A Skull - Puntius javanicus The skull of Puntius javanicus is laterally compressed and the cranial bones are hard. The antero -lateral mouth gape is bordered by maxillaries and premaxillaries at the upper jaw, and articulars and dentaries at the lower. Neurocranium 1. 1 Olfactory region The olfactory region is constituted by prevomer, mesethmoid, lateral ethmoids, lacrymals and nasals (Fig. I) The mesethmoid is a median bone with its posterior half elevated so as to reach the frontal bones. On either side, along the ventrolateral side of the mesethmoid is a depression which contributes to the formation of the olfactory capsule. The lateral ethmoid is a quadrilateral bone with a pair of extensions, one directed backwards and the other forwards. The former joins the frontal by extending to its ventral side. The bone which contributes partly to the formation of the nasal capsule bears an aperture for the penetration of the olfactory nerve. The nasals are dum-bell shaped. Its anterior end is flattened for attachment to tendons. The anterior end of the nasal is connected to the head of maxilla by a long muscle. Another muscle connects the anterior end of the nasal with the posterior part of the mesethmoid. There is a cavity in the nasal bone with an opening to the anterior for the accomodation of tendons. Thus the bone is actually a bony tube in the anterior half.
66 The prevomer is broad anteriorly; the pointed posterior part runs back below the junction of two lateral ethmoids to join the parasphenoid. Dorsolaterally the bone bears a pair of pits into which fit the corrospondig projections of the lateral ethmoids of each side. The space enclosed by the prevomer and mesethmoid is filled with a cartilage which has a triangular head and a forked tail. Ventrally the prevomer bears a pair of depressions in which tendons from the palatine are inserted. The lachrymals are thin, triangular and are attached by ligaments to the lateral ethmoids. 1 .2 Orbital region The orbital region includes the frontals, the circumorbital bones and the anterior part of the parasphenoid. (Fig.1) The frontals which contribute to the major part of the anterior dorsal surface of the neurocraninum are a pair of triangular bones. At their junction is a median ridge formed by the wing like extensions of the inner margin of each bone. Anteriorly, each frontal over laps the lateral ethmoid and the mesethmoid. Posteriorly it articulates with the supraoccipital, parietal, pterotic and the sphenotic. Frontals of the orbits anteriorly and the cranium posteriorly. In addition to the median ridge, there is a pair of lateral ridges on each frontal which converge anteriorly. On the vertral surface of each frontal is a facet for the articulation of the alisphenoid. The parasphenoid extencOrom the basioccipital to the prevomer. It is a boat-shaped bone flooring the neurocranium. At its anterior end there is a pouch - like structure ventrally which receives the posterior pointed end of the prevomer and articulates with it. A pair of processes

67 directed upwards are present at the region of the myotome. The wing like processes cover the alisphenoid. In between the lateral, processes, is articulated the median process of the basisphenoid. At the anterior end of the parasphenoid the concavity is divided into two equal halves by a median ridge. Thus the space within the rostrum is divided into two posteriorly, to accomodate the forked portion of the cartilage inside the rostrum. The bones of the circumorbital (Fig. I) series are reduced. There is a thin and narrow bone representing the preorbital. Instead of encircling the orbit this bone lies in the line with the maxillaries branch of the Adductor mandibulae muscle. Its anterior end is connected to the lacthrymal and its posterior end reaches the hyomandibular. A thin transparent bone lying at the posterior dorsal border of the orbit and connected by ligaments to the frontal and sphenotic is the postorbital. The interorbital septum is membranous. It extends from abovethe parasphenoid to the underside of the frontals. On the ventral surface of the frontals the septum is doubale walled, but lower down, it is single. Thus the septum is paired above and united below. 1.3 Auditory region The auditory capsule is composed of prootic, epiotic, sphenotic, pterotic and opisthotic bones. (Fig. WS) A pair of large pro-otics form the floor and sides of the otic capsules. Each prootic is irregular in shape. The ventral extremities of the prootics clo' diverge and articulate with the parasphenoid. Internally, each prootic has a transverse ridge just above the articulation on the parasphenoid. The sphenotic, pterotic, and the epiotic form the roof of the auditory capsule, the former anteriorly and latter two posteriorly

68 from the roof of the auditory capsule. By its articulation with the posteriolateral side of the frontal, sphenotic forms the posterior border of the orbit. The outer lateral side of this bone bears a ridge which along with the pterotic ridge enclosed a cavity for the accomodation of the dilator operculi muscle. The pterotic bones occupy the lateral region of the cranium. The prootic ridge is continuous with the second outer ridge of the frontal. A small epiotic articulates with the parietal, supraoccipital, episthotic and partly with the pterotic. Dorsally this bone bears a horn directed backwards which provides the surface for the upratemporal. The parietals are small round bones which are separated from each other by a median supraoccipital. There is a prominent median parietal crest longitudinally over each parietal bone. The parietal is firmly articulated to the frontalnteriorly, the epiotic and opisthotic posteriorly and thesupraoccipital and the pterotic laterally. The alisphenoids are a pair of flat bones disposed vertically below the frontals. It is an almost triangular bone.

69 One side of this bone is free and it borders the anterior opening of cranial cavity. Along one side this bone articulates with the ventral surface of the frontal and the other side it articulates with the sphenotic and the basisphenoid. 1 . 4 Occipital region The supraoccipital (Fig. WS) situated in the midline of the dorsal hind end of the neurocranium is a small bone having one part. The exoccipital (Fig. WS) forms the side wall of the occipital region. Each equal half of the bone is regular shaped and meets with its partner of the same side. Being interposed between the exoccipitals, the basioccipital (Fig. WS) lies mid ventral of the occipital region. 2. Branchiocranium 2. 1 Oromandibular region The oromandibular region (Fig. AP) includes bones forming the jaws and suspensorium. The region consists of hyomandibulars, rnetapterygoids, quadrates, symplectics, ectopterygoids, endopterygoids, palatines, maxillae and pre maxillae. The upper jaw proper is supported by maxillae and pre -maxillae. The premaxillae alone border the gape of mouth, but the lower flat portion of the maxilla covers the angle of the mouth when it is not fully open. Each premaxilla has a process near the anterior end which is directed backwards. It is at the region of these processes that the two bones are closely connected to each other by ligaments. The maxilla lies posterior

70 and parallel to the premaxilla. Its lower end has a flat process which overlaps the angle of mouth. A tendinous connection exists between palatine head and the maxillary head. The hyomandibular connects the jaw with the skull. The upper portion of this bone is provided with three articulating heads, two fit into the corresponding sockets of the sphenotic and the pterotic. The ridge on the hyomandibular articulates firmly with the preopercular running along with it. Articulated to the lower side of the hyomandibular is the metapterygoid which is a flat bone flooring major part of the cheek and providing surface for the support of the body of the mandibular muscles. The endopterygoid is a thin bone with winglike expansion on the inner side. External to the endopterygoid is a rod - like ectoptergoid whose end bears a small process or articulating with the palatine. The nasals and the head of the maxilla are connected to the head of the palatine by tendon s. The quadrate is a triangular bone which articulates with the metapterygoid, hyomandibular and the ectopterygoid. Ventrally, this bone has a prominent ridge which is firmly united to the rod like symplectic bone. Each half of the lower jaw is constituted by the articular and dentary. The articular is a dagger shaped. Posteriorly, the handle of the dagger bears a head and a cavity for articulation with the corresponding cavity and head of the

71 quadrate. The dentary borders the lower jaw. The posterior part of the dentary is forked and has a cavity for muscles as well as for the articular bone. 2.2 Opercular Region The opercular bones (Fig. KP) are thin, light and translucent. The preopercular is crescent - shaped with the anterior hard edge and bears posteriorly a thin frill with wrinkled edges. The anterior edge is firmly articulated to the ridge of hyomandibular and the lower end reaches the lower jaw. The opercular is a flat triangular bone with a thick ridge along the anterior side. The upper portion of the opercular provides a facet for the origin of the dilation operculi. Below the opercular bone are the subopercular and the interopercular. 2.3 Hyobranchial Skeleton The hyobranchial skeleton supports the gills and the toothed inferior pharyngeal bone (Fig. L) The first four pairs of branchial arches are formed of the usual segments. In the median line there are three basibranchials corresponding to the first three branchial arches. The first and second basibranchials are small while the third one is very long.

72 The third hypobranchial is connected to the sides of the third basibranchial. The three hypobranchials belong to the first three arches. The fifth arch is represented by the inferior pharyngeal bone. The third and fourth ceratobranchials have wing like expansions anteriorly. The pharynlobranchial of the first epibranchial is a small bone connected by ligaments to the epiotic bone. The pharyngobranchial of the second epibranchial, is connected to the first epibranachial. The extremity of the fourth epibranchial - which is bent over the process of the third epibranchial is connectd to the same by a strip of cartilage. Posteriorly, there is a very small bone connected to the fourth epibranchial corresponding to the fifth pharyngobranchial. A pharyngobranchial is lacking for the third epibranchial. B. Vertebral Column All the vertebrae are well ossified. Trunk Region In these three examined specimen's caudal vertebrae can be separated from trunk vertebrae one by one by the presence of posteriorly directed neural and haemal spines. The centrum of a trunk vertebrae is amphicoelous and the space between the centra of the adjacent vertebrae is filled with the remains of the notochordaltissue. .(Fig. PS)
73 A typical vertebra is made up of a backwardly directed and flattened neural spine, a pair of zygapophyses, an amphicoelous centrum and a pair of transverse processes. Caudal Region A typical caudal vertebra (Fig. F, G) differs from trunk vertebra, having the pointed neural spines directed still backwards (1250). The neural canal becomes progressively reduced. C. Appendicular skeleton The Pectoral girdle (Fig. P) lies composed of both replacing and dermal bones. The pectoral girdle in Puntius javanicus lies behind the branchial cavity and is made up of two identical halves. Each half supporti) the pectoral fin and is made up of six bones: the supracleithrum, metacleithrum, cleithrum, coracoid, scapula and post cleitherum or post clavicle. The pectoral fin conists of fifteen rays
74 2. Pelvic girdle And Fin The pelvic girdle in Puntius javanicus is a very simple structure and is made up of the basipterygium which corresponds to the ischium and the illium on each side. Each basipterygium (Fig Q) is a broad piece of bone having an anterior process (ischium) and dorsolateral process on the posterior side. The pelvic fin consists of 8-9 rays. 3. Median fins: The median fins include the dorsal, anal and the caudal fins and their skeleton which consists of radials and fin rays. Dorsal fin It has 7-8 finrays and an equal number of radials. There are no spines on spinous fin rays. The distal first radial articulates with the neural spine. Each radial shows two processes arising from the proximal and the distal parts. (Fig. KB) Anal fin It corresponds in position and structure to the dorsal fin but lies on the vertral surface. It consists of 5-6 fin rays. The distal part of each radial isapplied to the haemal spine of the corresponding caudal vertebrae. Caudal fin It consists of 13 to 16 fin-rays associated with the last two caudal vertebrae. Vetral to the urostylar process are the hypourals. The haemal spines of the penultimate vertebra 60 also supports the last twofin-rays (Fig. G)
75 D. Ribs Each rib is a slender curved rod directed downwards and backwards between the muscle segments.
76 Systematic Position and General Feature, Ctenopharyngodon idella (Valenciennes (1844) Phylum - Vertebrata Subphylum - Craniata Super class - Gnathostomata Seriers - Pisces Class - Teleostomi Subclass - Actinopterygii Super order - Osteriophysi Order - Cypriniformes Family - Cyprinidae Genus - Ctenopharyngodon Species - idella Distinguishing Characters D iii7; A iii 7-8; pi 17; V i 8 1) Body stout and elongate. 2) Head broad, with a short rounded snout. 3) Mouth subterminal, upper jaw slightly protractile. 4) Dorsal fin inserted slightly nearer to snout. Distribution - C. idella or grass carp is a native to China and Russia, occuring in the lower and middle reaches of the rivers Amur, Sungani and in the lake Khanka. Habitat - Originally the grass carp was a riverine stock but through intensive introduction and accidental release the fish becames a regular inhabitant of reservoirs, lakes, tanks, ponds etc.
77 Skull of - Ctenopharyngodon idella, The skull of C. idella is laterally compressed and the cranial bones are hard. The dorsal surface of the neurocranium is transversed by a long medium ridge
supraoccipital. Neurocranium 1.1 Olfactory region The ethmoid, an unpaird median bone, forms the apex of the skull and bears a pair of each of median and lateral horns. The lateral ethmoid is a unpaired, broad, nearly ear shaped, hard bone forming the anterior limit of the orbit along with the help of a process coming out of the outerside of the bone. The vomer is a small bone consisting of a backwardly directed horizontal stem which bears a long narrow splint – like process at its centre. The small elongate curved nasal attached super ficially to the antero - dorsal part of the ethmoid by connecting tissue is placed over the nasal capsule. 1 . 2 Orbital region Paired long flat elongate frontals (Fig. PP) form Three fourth part of the dorsal roof of the neurocranium one below the middle of the outer edge Is produced into a lateral prominent wing like flange.
78 The orbitosphenoid is a compound bone formed by the fusion of its two equal halves at midventral and lies between frontals and parasphenoid. The small regular Pleurosphenoid is situated mid ventrally on the floor of the cranium and exended from the ethmoidal to occipital region. The parietal is almost anangular plate – like roofing bone covering the dorsolateral side of the neurocranium. The crircumorbital series is made up of two supra orbital, two infra orbital and two suborbital, (Fig. PP) light bone ., which surrounded the eye. The second supraorbital, almost half the size of the first supraorbital, is situated ventral to the lateral ethmoid and frontal, 1 .3 Auditory region The sphenotic (Fig. PP), a roofy bone of the auditory capsule, is situated in the antero - lateral part of the region, limiting the posterior border of the region, limiting the posterior border of the orbit and the anterior border of the auditory. It is a small replacing bone with a thick main part and a elongate process. The pterotic (Fig. WS) forms

consists of two distinct portions the thin flattened outerpart which bears a small hole at its middle for the passage of the post orbital canal of the lateral line system. A triangular shaped bone the epiotic (Fig. WS) another important member of the auditory bone, form the posterior region of the capsule and extends behind the cranium as a free termination.
79 The prootic (Fig. WS) is well developed, small, almost oval shaped bone, forms the major part of the floor of the auditory region and meets its counterpart at the midline. The very small angular opisthotic, which shares as the posterior floor of the auditory region, meets the prooitic anteriorly, the posttemporal posteriorly, the exooccipital at the innerside, and the pterotic at the outerside. 1 .4 Occipital region The supraoccipital (Fig. WS), situated in the mid line of the dorsal hind end of the neurocranium, is a large bone having two distinct parts the upper spear shaped flat plate and the lower somewhat dumbell - shaped portion. The exoccipital (Fig. WS) forms the side wall of the occipital region and is perforated on its ventral side by a small oval foramen for the glossopharyngeal and the vagus nerves. Each equal half of the bone is irregular shaped and meets medially with its partner of the opposite side, encircling the dorsal and lateral boundaries of the foramen magnum. Being interposed between the exoccipitals, the basioccipital lies mid ventral to the occipital region. It is an elongate bone with narrower anterior and the broader posterior half. (Fig. WS) 2. Branchiocranium 2. 1 Oromandibular region
80 A small thin some what triangular element on the antero - ventral side of the skull, the palatine (Fig. AP), is attached infront of the ethmoid cornu and behind the ecto and endoptrygoid. The large elongate splint like ectopterygoid (Fig. AP) or the greater part of the anterior border, of the palatopterygoid plate. The small thin irregular shaped entopterygoid is widely separated from the quadrate, but bordered by palatine and ectopterygoid anterio - ventrally and by metapterygoid posterio-dorsally. Occupying the largest part of the palatopterygoid plate, the metapterygoid (Fig AP) is a large plate like irregular bone being surrounded by endopterygoid anteriorly, quadrate ventrally, symplectic postero - ventrally, and hyomandibular postero-dorsally. The symplectic (Fig. AP), a small crescent shaped bone with a concavity anteriorly, is placed posterior to the metapterygoid and the quadrate and fits into a notch at the upper part of the posterior edge of the quadrate. The quadrate (Fig. AP) is a flat, conspicuous, nearly triangular shaped bone with the narrower apex extending forwards up to the bend of the ectopterygoid and the broad thickened base joincat its posterodorsal edge to the symplectic. The premaxilla (Fig. WS) a small thin slightly curved flattened bone, forms the anterior border of the upper gape of the mouth. The maxilla (Fig WS) is a long, thin, flat, scythe-shaped bone and has two distinct parts the short rather stout handle, and long thin blade. 2. 3 Hyobranchial skeleton The hyobranchial skeleton comprises the hyoid arch series and the branchial arches. Each ramus of the hyoid arch loop is made up of the
81 dorsal hyomandibular, and the ventral hyoid cornu series comprising the bones the interhyal, epihyal, ceratohyal, basihyal and urohyal one each; hypohyals two, and branchiostegals six. The hyomandibular is an irregular strong bone with a broad upper portion and a long rod like lower portion. The bone is very intimately applied to the depression at the dorso - anterior corner of the opercular bone by the hyomandibular knob. The interhyal (Fig. L) a small rod-like bone lying on the inner side of the preopercle, hangs from the hyomandibular and articulates posteriorly with the apex of the rod like bones with prominent groove. The first three epibranchials (Fig.L) are of equal type. Each branchial arch is made up of four pieces. They are
ventral hypobranchial. In C. idella there is an elongated and oval pharyngobranchial bone (Fig L) bearinf numerous small fine teeth on its ventral surface. Epibranchials are small curved bones connected with the suprapharyngeals above and with the corresponding ceratobranchials below. Ceratobranchials (Fig. L) are the longest bones among the bones of hyoid and the branchial arches. Hypobranchials (Fig. L) are small thick bones connected with the basibranchials anteriorly while their posterior portion is suturally connected with the ceratobranchials. B. Vertebral Column All the vertebrae are well ossified. Trunk region
82 Apart from the first six vertebrae, all the remaining vertebrae of the trunk region are similar in structure and any one of them may be considered as a typical one. The centrum of a trunk vertebra is amphicoelous and the space between the centra of the adjacent vertebrae is filled with the remains of the notochordal tissue. `A typical vertebra is made up of a backwardly directed and flattened neural spine, a pair of zygapophyses, an amphicoelous centrum and a pair of transverse processes. (Fig. PS) The neural arches of the two sides meet on the above side and enclose a triangular neural canal. Caudal Region A typical caudal vertebra (Fig. F, G) like the trunk vertebra, consists of the concave centrum with the median dorsal, median ventral and paired dorsolateral and ventrolateral grooves. C. Appendicular skeleton The appendicular skeleton comprises the pectoral and pelvic girdles together with their fins. 1. Pectoral girdle and Fins The pectoral girdle (Fig. P) provides ample space for the origin of a number odd muscles as well as gives support to the pectoral fin. Apart from pectoral fin, it helps in the movements of the jaws, as well as buccal and pharyngeal structures. The pectoral girdle, in C. idella lies behind the branchial cavity and is made up two identical halves. Each half supports the pectoral fin and is made up of six bones: the supracleithrum, metacleithrum, cleithrum, coracoid, scapula, and post - cleithrum or post - clavicle.

83 The pectoral fin consists of 8 - 9 rays. 2. Pelvic girdle (Fig. Q) is a very simple structure and is made up of the basipterygium which corresponds to the ischium and the ilium on ecah side. Each basipterygium is a broad piece of bone having an anterior process and a dorsolateral process on the posterior side. The pelvic fin consists of 17 - 18 rays. Median fins The median fins include the dorsal, anal and the caudal fins and their skeleton which consists of radials and finrays. Doral fin The dorsal fin (Fig. KB) is well developed. The distal first radial articulates with the neural spine. Each radial shows two processes arising from the proximal and distal parts. The fin - rays are 15 - 18 in number which are jointed laterally by ligaments. Anal fin It consists of 7-8 rays which are supported by the vertebrae. The (Fig. KB.) distal part of each radial is applied to the haemal spine of the corresponding caudal vertebrae. Caudal fin It consists of 10 - 12 rays associated with the last caudal vertebrae. The free radial is spine like. its pointed end lies in the depression between the last caudal vertebra and urostyle and the broad

84 distal end expanded at their distal ends. The hypurals are broad at their proximal end. D. Ribs A series of paired ribs are attached to the distal ends of parapophyses of the trunk vertebrae. Each rib is a slender curved rod. The anterior ribs are thinner.

85 Systematic Position and General feature Hypophthalmicthys molitrix Valenciennes (1844) Phylum - Vertebrata Subphylum - Craniata Super class - Gnathostomata Seriers - Pisces Class - Teleostomi Subclass - Actinopterygii Super order - Osteriophysi Order - Cypriniformes Family - Cyprinidae Genus - Hypophthalmicthys Species - molitrix Sc. Name - Hypophthalmicthys molitrix Distinguishing Characters D ii7; A ii - iii 12 - 14; Pi 17; V i 7 1) Body stout and Compressed 2) Head rather small., post operculum with radiated striae. 3) Mouth terminal, lower jaw slightly longer than upper. 4) Dorsal fin short, inserted slightly behind pelvic fins. Distribution - The river system of Yangtze, Kwangsi, Kwangtung in south and central China, and the Amur basin of Russia are the native waters of H. molitrix or Silver carp. Habitat - H. molitrix is originally a riverine habitat, pelagophilic in nature and prefers swift current, but subsequently adapted in lentic

86 environment through domestication. Cold weather, is not cause unfavourable to them. I. Description A. Skull The skull of Hypopthalmicthys molitrix is laterally compressed and the cranial bones are thin and light. The skull is two times as long as it is broad. The dorsal surface of the neurocranium is traversed by a long median ridge

supraoccipital. I. Neurocranium 1. 1 Olfactory region The ethmoid, an unpaired (Fig. C, D) median bone, forms the apex of the skull and bears a pair each of median and lateral horns, the ethmoid cornua which is broad, stout flat and posteriorly deeply notched. The lateralethmoid is a paired broad, nearly ear- shaped, thin bone forming the anterior limit of the orbit along, Nith the help of a process coming out of the outer side of the bone. Anterodorsally it sends out vertical oblique ridge which meets the ethmoid and posteriorly produces behind a projection to join the orbitosphenoid. The vomer is a small 'T shaped median bone consisting of a backwardly directed horizontal stem which bears posteriorly a long narrow splint - like process at its centre. The small elongate slightly curved nasal attached superficially to the antero-lateral part of the ethmoid by connecting tissue, is placed over the nasal capsule. 1. 2 Orbital region

87 Paired long flat elongate frontals (Fig. C, D) form three fourth part of the dorsal roof of the neurocranium and are attached to or bordered anteriorly and antero-laterally by the ethmoid and lateral ethmoids; laterally by the sphenotic, postero - laterally by the temporal foramen and parietal, and posteriorly by the supraoccipital. A little below the middle of the outer edge it is produced into a lateral prominent wing like flange. The Orbitosphenoid (Fig. C, D.) is a compound bone formed by the fusion of its two equal halves at midventral and lies between frontals and parasphenoid. Forming the floor of the brain box, if separates the orbits. The small irregular pleurosphenoid (Fig. C, D) is situated mid- ventrally on the floor of the cranium and extended from the ethmoidal to occipital region. The anterior one - third of the bone is slightly flattened, the middle one - third produced into a large dagger - shaped papery wing - like extension to the back beyond the occiput. The wings of both the the equal halves of the bone are closely applied along its length and articulate with the basioccipital. The parietal (Fig. C. D) is almost a triangular platelike roofing bone covering the dorso lateral side of the neurocranium. Each half of the bone is produced into two processes on its inner edge, the anterior are being joined to the frontal and the posterior process to the occipital and epiotic, covering a large temporal foramen along the outer line of the frontal. The circumorbital series is made up of two supraorbital, two infraorbital, and three suborbital (Fig. C, D) papery bones which

88 surround the eye. The first supraorbital is a small and slightly curved bone lying underneath the nasal. The second supraorbital, almost twice the size of the first supraorbital, is situated ventral to the lateral ethmoid and frontal. 1 .3 Auditory region The sphenotic (Fig. WS), a roofy bone of the auditory capsule, is situated in the antero - lateral part of the region, limiting the posterior border of the orbit and the anterior border of the auditory. it is a large, nearly triangular, replacing bone with a thick main part and a flattened process at its outer free edge andarticulates behind with the pterotic and below with the prootic. Lying behind sphenotic, the pterotic. (Fig. WS) forms

consists of two distinct portions the thin flattened outer part which bears. a small hole at its midcpe for the passage of the postorbital canal of the lateral line system and is produced behind into a long slightly curverd pointed spine projecting beyond the cranium and the inner more conspicuous, well develped main part lodging a large bulla for the vesicle of the swimbladder and a deep channel for the horizontal semicircular canal of the internal ear. A triangular shaped bone, the epiotic (Fig. WS) another important member of the auditory bones, forms the posterior region of the capsule and extends behind the cranium as a pointed posterior free termination. The latter applies over the pterotic process and encloses the preepiotic fossa posteriorly.

89 The prootic (Fig. C, D) a well developed, large, almost round shaped bone, forms the major part of the floor of the auditory region and meets its counter part at the mid - line. The very small triangular opisthotic (Fig. WS) which shares at the posterior floor of the auditory region, meets the prootic anteriorly. 2. Branchiocranium. 2. 1 Oromandibular region. A small thick somewhat angular element on the antero ventral side of the skull, the palatine is attached infront of the ethmoid cornu and behind the ecto and entopterygoids. The small splint like ectopterygoid (Fig. AP) forms the smaller part of the anterior border of the palatopterygoid plate. The large thin regular shaped endopterygoid is widely separated from the quadrate but bordered by palatine and ectopterygoid antero- ventrally and by metapterygoid postero dorsally. Occupying the largest part of the palatopterygoid plate, the metapterygoid (Fig. AP) is a large plate like regular bone being surrounded by endopterygoid anteriorly, quadrate ventrally, symplectic posteroventrally, and hyomandibular posterodorsally. The symplectic (Fig. AP), a thin bone with a concavity anteriorly, is placed posterior to the metapterygoid and the quadrate and fits into a notch at the lower part of the posterior edge of the quadrate. The quadrate (Fig. WS) is a flat, conspicuous, nearly angular shaped bone with the narrower apex extending forward up to the bend

90 of the ectopterygoid and the narrow thinned base join at its posterodorsal edge to the symplectic. The premaxilla (Fig. WS) is a small, flat scytheshaped bone and has two distinct parts the short rather stout handle and small thick blade. A large thick nearly angular bone with a higher elevated posterior curvature, the angular or articular (Fig. WS) fits into the basal pocket of the dentary bone. The triangular shaped dentary (Fig. WS) forms the anterior half of the lower jaw. Its broad base anteriorly fitswith the base of the angular, and the narrower apex posteriorly forms the mandibular symphysis with its partner of the other equal half of the mandible. 2. 2 Opercular bones The opercular series is formed with the operculum, the subоperculum the interoper culum and the preoperculum on either side of the gill cover. The operculum (Fig KP) is a angular bone with both the dorsal and the ventral edges are narrow, the lower being broadest. The sub operculum (Fig KP) is nearly a angular bone with the dorsal margin almost curved. Round shaped interoperculum (Fig. KP) is overlapped by the preopercle at its entire curved anterior margin and overlaps postero- laterally the subopercle and the opercle. 2.3 Hyobranchial skeleton It is formed by the bones of the hyoid arch and the opercular bones. The hyobranchial skeleton on each side includes a

91 hyomandibular, a symplectic, an interhyals, an epihyal, a ceratohyal, a hypohyal and a basihyal. The hyomandibular (Fig L) is a small stout bone lying on the lateral side of the skull. Although small, it is a quite important piece. The interhyal (Fig. L) is a small bone which appears to be embedded in the ligaments. It is actually joined by these ligaments to the inter-opercular anteriorly, to the hyomandibular dorsally and the epihyal ventrally. The epihyal (Fig L) is a small flat bone united to the ceratohyal by a Cartilaginous joint. The ceratohyal (Fig. L) is the longest and stoutestbone of the hyoid series. To its ventro-mesial side are attached the first seven branchiostegal rays. The hypohyals (Fig. L) are movably joined infront with a median basihyal. Posteriorly they are articulated with the ceratohyals. Branchiostegal rays (Fig. L) are very thin flattened curved bones. Seven out of the total eleven are attached to the ceratohyal and remaining four to the epihyal on each side. The anterior three are smaller than the rest. Six long membranous filamentous branchiostegal bones (Fig. S) are arranged one behind the other. First four of the five branchial arches (Fig. S) are complete and the fifth one is reduced to a small piece. The first and the second pharyngobranchials (Fig.S) are quite separate from each other.

92 The suprapharyagobranchial (Fig. S) is a long bone. Rod-like bones with prominent groove the first three epibranchials (Fig.S) are of equal type, while the fourth one is modified into a broad irregular plate with a cartilaginous flap arising vertically at its hind end to form the pharyngeal pocket. All the five pairs of feeble rod-like ceratobranchials (Fig. S) are of usual type, excepting the fifth pairs. There are only four pairs of hypobranchials (Fig. S), the first two pairs are quite developed long rod like bones with grooves. The first, second and the third pairs of basibranchials (Fig. S) are ossified. B. Vertebral Column. All the vertebrae are well ossified. Trunk Region In three specimens examined caudal vertebrae can be separated from trunk vertebrae ones-by the presence of posteriorly directed neural and haemal spine. (Fig. E, F) First three vertebrae have very strong neural spines slanting forward. First neural spine is long, almost at right angles to its centrum. A typical trunk vertebra has a forwardly directed neural spine, neural arch, amphicoelous centrum and more or less straight or only slightly backwardly directed short haemal spine and a small haemal arch. Caudal region

93 A typical caudal vertebra (Fig. F, G) like the trunk vertebra, consists of the concave cetrum with the median dorsal, median ventral and paired dorso lateral and ventro-lateral grooves. C. Appendicu lar Skeleton The appendicular skeleton comprises the pectoral and pelvic girdles together with their fins. 1 . Pectoral girdle and fin. The Pectoral girdle (Fig P) lies composed of both replacing and dermal bones. The replacing bone form the primary girdle, each half of which conists of scapula, coracoid and a mesocoracoid. The cleithrum or clavicle is the largest bone that covers the primary girdle from outside. The post temporal is a small, forked bone, connecting the supra cleithrum with the skull. The pectoral fin consisVof 17 rays. 2. Pelvic girdle and fin. It is consisting of two parts, an anterior forked portion which bears
Fig. Q) midline and is continued behind into the cartilage. The pelvic fin consists of ten rays. 3. Median fins. Dorsal fin The dorsal fin (Fig. KB) is well developed. The apex of the first radial lies between the neural spines of the fourth and fifth vertebrae, of the second radial between fifth and sixth of the radial between seventh and eighth and fourth radial between ninth and tenth vertebrae.
94 Anal fin The anal fins apex lies in between the haemal spines of two adjoining caudal vertebrae and its softened distal bears two depressions, one on the anterior face and two on the posterior face. (Fg. KB) Caudal fin It is supported by dorsally flattened rods on the dorsal and ventral sides of urostyle. The free radial is spine like, its pointed and lies in between the caudal vertebra and urostyle and the broad distal (Fig. G) end supports the first ray of fin. D. Ribs Each rib is a slender curved rod directed downwards and backwards between the muscle segments.
95 Explanation of test figure-1 Fig. I. - Skull of C. idella (dorsal view) Key to words AL - Alisphenoid AR - Articular FR - Frontal LET - Lateral ethmoid PR - Parietal PTE - Pterotic PV - Pre vomer SOC - Supra occipital SOC (cr) - Supra Occiptial crest SP - Subopercular
96
97 Fig. AP - Bones of the Upper jaw of Cyprinid fish key to Words. ENPD - Endopterygoid HYB - Hyomandibular INM - Interoperculum MRD - Metapterygoid ORM - Operculum PAM - Preoperculum QRD - Quadrate SBM - Suboperculum SBM - Suboperculum SYM - Symplectic
98
99 Explanation of Test Figure L Fig . -L Hyodl Arch and Branchiostegal Rays of Cyprinid Fishes key to words; BA - Basihyal HY - Hypohyal CE - Ceratohyal EP - Epihyal IN - Interhyal UR - Urohyal BR - Branchiostegal Rays
100
101 Explanation of Test Figure - PS Fig. PS- Anterior trunk vertebra and Posterior trunk vertebra of Cyprind fish. Key to Words CNM - Centrum NEAH - Neural Arch NESP - Neural Spine PRPS - Parapophyses PZHS - Prezygapophyses
102
103 Explanation of test figure - PP Fig. PP - Skull of Puntius javanicus (Ventral view) Key to words ART - Articular BOC - Basioccipital FR - Frontal LTH - Lateral ethmoid PRO - Prootic PSH - Parasphenoid PTE - Pterotic PTE - Pterotic PV - Prevomer SP - Subopercular SPH - Sphenotic
104
105 Explanation of test figure - CD Fig. - CD - Dorsocranium (A), Ventrocranium (M molitrix) of H. Key to words; BOO - Basioccipital ECO - Ethmoidcorru EF - Ethmofrontal fontande EP - Epiotic ETH - Ethmoid FR - Frontal LCL - Lacrymal LEH - Lateral ethmoid LEP - Lateral ethmoid process OR - Orbit ORH - Orbitosphenoid PA - Parietal PEPOTF - Prepiotic tossa PLSPH - Pleurospsphenoid PRO - Prootic PTO - Pterotic SOC - Supraoccipital SOCSP - Siupraoccipital Spine SPH - Sphenotic TF - Temporal formen
106
107 Explanation of Test Figure - S and T Fig. S - Hyobranchial Skeleton of Cyprinid fish Fig .T - Urohyal of a carp key to words; BA - Basibranchial BS - Basihyal CA - Cartilage CB - Cerato branchial CER - Ceratohyal EP - Epihyal EPB - Epibranchial HYB - Hyobranchial KL - Keel LW - Lateral wing PH - Pharyngobranchial;
108
109 3.2 Observation on Morphomeristic Characters 3.2 Table 1 (b) reveals the bio-statistical analysis of the mean of length of Ctenopharyngodon idella. H. molitrix, P. javanicus, L. rohita, W. attu .it was noticed that on an average W. attu attains the maximum length which is quite clear from the mean value 326.67 mm ±8.31 followed by H. molitrix (1 71 ±.98 mm) and L. rohita (1 05 mm±1 .36). The mean length of C. idella i.e. 1 35.67 mm (±1 .73) was supposed to be the smallest fish as far as its length is oncerned. The mean length was calulated by taking the average three replicates. The minimum value of standard deviation varies from 2.45 to 24.94. Table 2(b) indicates the length of head of all the five fishes analysed for the mean length S.E± and standard deviations. From the statistical data it appearlhat mean length of head was found to maximum in W. attu that 50± 2. 72m.m followed by H. molitrix, 30 ± 1.277m.m. The least mean length of the head among the five fishes was found in L. rohita measu ring about 1 5.67±1 .1 mm. This shows that mean length of the body is not dependent on the mean length of the head of a particular fish. The standard deviation from the mean values and variance have altready been given in the table. Table-3(b) denotes the statistical analysis data made for the mean length of the girth of skull which showed the maximum girth in W. attu was 49±2.72. The length of girth of skull in H. molitrix was

110 next to W. attu which was 29 ± 1 .277. The lowest gi rth of skull was found to be 14.67± 1.1 mm in L. rohita. This values were calculated at standard deviation from the mean values between 0.81 to 8.16 the minimum and the maximum. Table 4(b) shows the count of lateral line scales of five different fishes. As is quite apparent from the table H. molitrix showed the maximum that is (112.33 ±0.6833) followed by L. rohita (42±1 .277). The minimum counts they are noticed in case of P. javanicus. Table 5(b) indicates the mean of length of a skull on its dorsal aspect. The statistical analysis reveals that the length of a skull as far as dorsal aspect is concerned varied in wide ranged five different fishes Maximum length of a skull was found to be in W. attu. This is avove 37.66 ±0.6866 followed by P. javanicus (36.33 ±0.9533). The length of a skull was observed to be minmum in L. rohita which is about 17.33±0.6833. The results mentioned in Table-6(b) show the mean length of maxillary bone. The data reveals that there is a very narrow range of difference as far as the length of maxillary bone is concerned. The length varies among the five different fishes from 2.0±0 to maximum 3.67± 0.1 6mm.The maximum length was observed in H. Molitrix whereas the minimum in L. rohita. The results mentioned in Table-7 (b) show the mean length of ventral aspect of opercular bone. The data reveals that there is a very narrow range of differences as far as the length of ventral aspect of opercular bone is concerned. The length varies among the five different fishes
111 from 3.33±.1566 to maximum 7.67±0.1 6. The maximum length was observed in W. attu whereas the minimum in P. javanicus. The results mentioned in Table 8 (b) show the mean length of ventral column. The length varies among the five different fishes from 84.33±.6833 to maximum 154.33±1.64. The maximum length was observed in W. attu whereas the minimum in L. rohita. Table - 9(b) shows the count of gill, of five different flshes. As is quite apperent from the table H. molitrix showed the maximum that is 121.67 ±.5666 followed by L. rohita 35.33 ± 0.63. The minimum counts were noticed in case of C. idella; the rest data have been given in the table. Table - 10(b) shows the count of pharyngeal teeth of five different fishes. As is quite apparent from the table C. idella showed the maximum number is 14 ± 0 followed by P. javanicus and H. Molitrix 7± 0 and 7±0 respectively. The minimum counts are noticed in the case of L. rohita 4 ± .9071 and Pharyngeal teeth are absent in W. attu. Table - 11 (b) shows the count of vertebrae of five different fishes. As is quite apparent from the table W. attu showed the maximum that is 71 ±1.277 followed by H. Molitrix 39± 1.44. The minimum counts were noticed in the case of Labeo rohita. (22.33± 0.41 66). Table - 12(b) shows the count of fin -rays of five different fishes. As is quite apparent from the table W. attu showed the maximum count ie 128 ± 3.13 followed by H. Molitrix 70.33 ±1.13 and minimum counts noticed in 9.67±1.03 in the case of P. Javanicus.
112 Table - 13 (b) shows the count of transverse line scales of five different fishes. As is quite apparent from the table W. attu showed the maximum i.e. 1.29 ± 0 followed by P. Javanicus1.26 ±.8561. the minimum counts noticed in .92±0 in the case of Labeo rohita. Table - 14 shows the bio-statiscal analysis of Comparative meristic characters of five different test species fishes. Analysis of variance was calulated by using F-test at 1% level of significance and 5% level of significance. The result reveals that the total length of five different fishes taking three specimens of each when calculated statistically give quite significant results at 5% level (F= 5.3763637 which is lesser than the table value t = 5.42). These values were observed at 15 d.f.. As regards the head length, it also gives the significant result at 5°0 level (F= 5.2424421 and t= 5.42). But the maximum girth of the skull of five different fishes where analyzed biostatical using F-test was found to be significant at 1% level of significance as d.f. 15 (Calculated value F = 24.9337 and t = 34.12). Lateral line scale also showed significant result at 5% level at the d.f 15. Transverse line scale were observed in five different fishes exhibit on significant result Similarly length of skull on its dorsal aspect was found to be not significant. Length of maxillary bone, length of vertebral column, vertebrae were the few parameters upon which the bio-statistical analysis showed no significant result altogether at df 15 at 5% level. The result mentioned in Table-14 on the other hand showed some parameters such as pharyngeal teeth and Fin Rays which were found to be most significant at the same degree of
113 freedom at 5% level. (The F values were o.40694 and 0.4658 respectively at the table value been t=5.42.) Table-16 (a) showed the statistical analysis of data for the co- rrelation between Total length and head length of C. Idella The data revealed that there is a perfect co-relation between the total length and head length of experimented fishes (r=1). Similarly, in part (b) of the table the analysis was carried out for the total length and the maximum girth of the skull Of the same fish which reveals the perfect correlation between these two parameters. Table 1 6(C) revealed the co-relation calculated for the total length and lateral line scales of C. Idella which was found to be in perfect Co-relation (r=1). Table 16(d) reports the Correlation Calculated by using the formula = $\sum \sqrt{\sum 2 \times \sum 2}$ The Calculated value of small r came exactly 1showing perfect Co-relation between these two parameters of C. idella. Table-17(a) also showed the statistical analysis of data for the total length of P. javanicus with the head length of the same. The results obtained show perfect Correlation between these two parameters (r=0.99). 17(b) showed the total length and maximum girth of P. javanicus analysed bio-statistically where the value of co-relation was (0.99). There by indicating a perfect Co-relation between these two parameters.

114 17(C) showed the correlation between total length and lateral line scales of the same fish using the same procedure. The value of r was calculated to be 0.93 which indicates a perfect correlation between the observed data. Table -17(d) showed the co-relation between total length and length of skull on its dorsal aspect of P. Javanicus which give the perfect co-relation between the observed data r=0.99). Table -18 (a) revealed the co-relation between the total length and head length of H. Molitrix. The results obtain showed perfect co- relation between these two parameters Table 18(b) showed the co-relation between total length and maximum girth of skull of H. Molitrix analyzed bio-statistically where the value of co-relation was r=.99.There by indicating a perfect co- relation between these two parameters. Table 18(c) showed the co-relation between total length and lateral line scales of H. Molitrix analyzed bio-statically where the value of co-relation was r=.99. There by indicating. a perfect co- relation between these two parameters. Table 1 8(d) showed the co-relation between total length and length of skull on its dorsal aspect of H. Molitrix which give the perfect co-relation between the observed data (r = .99). Table 19(a) showed the statistical analysis of data for the co- relation between the total length and head length of Labeo rohita. The data revealed that there is a perfect co-relation between the total length and head length of experimented fishes

115 Similarly, in 19(b) showed that co-relation between total length and its max. girth of skull of L. rohita are perfectly co-related where the co-related value is (r = 0.989). Table 19(c) showed the co-relation between total length and lateral line scales oft. rohita analyzed bio-statistically where the value of correlation was (r=1). There by indicating a perfect co-relation between these two parameters. Table 19(d) showed the co-relation between total length and length of skull on its dorsal aspect of L. rohita which give the perfect co-relation between the observed data (r = 0.99). Table 20(a) showed the statistical analysis of data for the co- relation between the total length and head length of W. attu. The data revealed that there is a perfect co-relation between the total length and head length of experimented fishes r=0.98. Table 20(b) also showed that the Total length and maximum girth of skull of W. attu is perfectly co-related. Where the calculated value (r=.0.98). Table 20(c) showed the co-relation between total length and length of skull on its dorsal aspect of W. attu which give the perfect co-relation was r=0.94. There by indicating a perfect co-relation between these two parameters. Table 20(d) showed the co-relation between total length and length of skull on its dorsal aspect of W. attu which give the perfect co-relation was r=0.95. The analysis of variance was carried out using ANOVA methods for the total length of five different fishes within and

116 between the samples. The results in Table -21 showed the F- ratio of the samples as 110.40which was much higher than the table value at 5% level by observing the data at 10 degree of freedom vertically and 4 horizontally. This their lore indicates that the total length of different fishes is not significant when analyze bio-statistically. Table -22 reports the analyses of variance of the Head length of five different fishes. The mean square between the sarmpes were 490.26 whereas within the samples it was 25.07 which gave the F- ratio has 19.56 which is must higher than the head length of the fishes are not significant. Table-23 reports the analysis of variance of the length of maxillary bones of five different fishes which give the mean square values between the samples as 1.27 and within the sample as 0.133. The F-value thus calculated comes to be 9.548 which is quite less than the table values at 10-degree horizontal and 4degree vertical (f------ 14.55). Table -24 reports the analysis of variance of ventral aspect of opercular bones of five different fishes. The sum of squares between the sample were 40.93 where as within the sample it was 2.0. giving the mean square value as 10.23 and 3.2. The F - ratio thus, obtain was 51 .15 which shows that the t-ar-) gth of ventral aspect of opercular bone is not significant.

117 Table1(a) Comparison of Total length of five different Fishes S. No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 170 mm 167 mm 164 mm 2 Puntius javanicus 170 mm 135 mm 132 mm 3 Hypophthalmicthys molitrix 170 mm 167 mm 164 mm 4 Labeo rohita 110 mm 105 mm 100 mm 5 Wallago attu 360 mm 320 mm 300 mm Table 2(a) Comparison of Head length of five different Fishes S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 28 mm 26 mm 24 mm 2 Puntius javanicus 25 mm 24 mm 23 mm 3 Hypophthalmicthys molitrix 30 mm 32 mm 28 mm 4 Labeo rohita 20 mm 15 mm 12 mm 5 Wallago attu 60 mm 50 mm 40 mm

118 Table 1(b) Statistical Analysis of Length of Experimental fishes S.No. Fish Name Length of Mean Standard Error = √ Standard Deviation 1 Ctenopharyngodon idella 167 ± 1.73 2.45 2 Puntius javanicus 135.67 ± 1 .1 3.3 3 Hypophthalmicthys molitrix 171 ± .98 2.94 4 Labeo rohita 105 ± 1.36 4.08 5 Wallago attu 326.67 ± 8.31 24.94 Table 2(b) Statistical Analysis of Length of Experimental fishes S.No. Fish Name Length of Mean Standard Error Se= (SD/√n) Standard Deviation 1 Ctenopharyngodon idella 26 ± 1.277 1.63 2 Puntius javanicus 24 ± 0.543 0.82 3 Hypophthalmicthys molitrix 30 ± 1.277 1.63 4 Labeo rohita 15.67 ± 1.1 3.3 5 Wallago attu 50 ± 2.72 8.16

119 Table 3(a) Comparison of Maximum girth of skill of five different Fishes S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 27 mm 25 mm 23 mm 2 Puntius javanicus 24 mm 23 mm 22 mm 3 Hypophthalmicthys molitrix 29 mm 31 mm 27 mm 4 Labeo rohita 19 mm 14 mm 11 mm 5 Wallago attu 59 mm 49 mm 39 mm Table 4(a) Comparison of Lateral line scales of five different Fishes S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 42 41 40 2 Puntius javanicus 31 29 20 3 Hypophthalmicthys molitrix 112 115 110 4 Labeo rohita 44 42 40 5 Wallago attu 42 40 40

120 Table 3(b) Statistical Analysis of Skull girth S.No. Fish Name Length of Mean Standard Error = √ Standard Deviation 1 Ctenopharyngodon idella 25 ± 1.277 1.63 2 Puntius javanicus 23 ± 0.27 0.81 3 Hypophthalmicthys molitrix 29 ± 1.277 1.63 4 Labeo rohita 14.67 ± 1.1 3.3 5 Wallago attu 49 ± 2.72 8.16 Table 4(b) Statistical Analysis of Length of Experimental fishes S.No. Fish Name Length of Mean Standard Error Se= (SD/√n) Standard Deviation 1 Ctenopharyngodon idella 41 ± 0.27 .81 2 Puntius javanicus 29.67 ± 0.3166 0.95 3 Hypophthalmicthys molitrix 112.33 ± 0.6833 2.05 4 Labeo rohita 42 ± 1.277 1.63 5 Wallago attu 40.67 ± .3133 0.94

121 Table 5(a) Comparison of Maximum girth of skill of five different Fishes S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 30 mm 28 mm 26 mm 2 Puntius javanicus 40 mm 36 mm 33 mm 3 Hypophthalmicthys molitrix 30 mm 33 mm 28 mm 4 Labeo rohita 20 mm 17 mm 28 mm 5 Wallago attu 40 mm 38 mm 35 mm Table 6(a) Comparison of Lateral line scales of five different Fishes S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 3mm 3 mm 3 mm 2 Puntius javanicus 3 mm 2 mm 2 mm 3 Hypophthalmicthys molitrix 4 mm 4 mm 3 mm 4 Labeo rohita 2 mm 2 mm 2 mm 5 Wallago attu 3 mm 3 mm 3 mm

122 Table 5(b) Statistical Analysis of Dorsal Skull S.No. Fish Name Mean of Length of skull on its dorsal aspect Standard Error Standard Deviation 1 Ctenopharyngodon idella 28 ± 1.277 1.63 2 Puntius Javanicus 36.33 ± 0.9533 2.86 3 Hypophthalmicthys Molitrix 30.33 ± 0.6833 2.05 4 Labeo rohita 17.33 ± 0.6833 2.05 5 Wallago attu 37.66 ± 0.6866 2.06 Table 6(b) Statistical Analysis of Length of Experimental fishes S.No. Fish Name Mean of Length of Maxillary bone Standard Error Standard Deviation 1 Ctenopharyngodon idella 3 ±0 0 2 Puntius javanicus 2.33 ±0.1566 0.47 3 Hypophthalmicthys molitrix 3.67 ±1.16 0.48 4 Labeo rohita 2 ±0 0 5 Wallago attu 3 ±0 0

123 Table 7(a) Comparison of length of Ventral aspect of opercular bone S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 4 mm. 4 mm. 4 mm. 2 Puntius javanicus 4 mm. 3 mm. 3 mm. 3 Hypophthalmicthys molitrix 4 mm. 4 mm. 4 mm. 4 Labeo rohita 7 mm. 6 mm. 6 mm. 5 Wallago attu 8 mm. 8 mm. 7 mm. Table 8(a) Comparison of length of Vertebral Column. S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 120 mm 118 mm 116 mm 2 Puntius javanicus 118 mm 112 mm 110 mm 3 Hypophthalmicthys molitrix 130 mm 133 mm 126 mm 4 Labeo rohita 87 mm 84 mm 82 mm 5 Wallago attu 160 mm 155 mm 148 mm

124 Table 7(b) Statistical Analysis of Dorsal Skull S.No. Fish Name Mean-Length of Ventral aspect of opercular bone Standard Error Standard Deviation 1 Ctenopharyngodon idella 4 ± 0 0 2 Puntius Javanicus 3.33 ± 0.1566 0.47 3 Hypophthalmicthys Molitrix 4 ± 0 0 4 Labeo rohita 6.33 ± 0.1566 0.47 5 Wallago attu 7.67 ± 0.16 0.48 Table 8(b) Statistical Analysis of Length of vertebral column. S.No. Fish Name Mean of Length of vertebral column Standard Error Standard Deviation 1 Ctenopharyngodon idella 118 ±1.277 1.63 2 Puntius javanicus 113.33 ±1.1333 3.4 3 Hypophthalmicthys molitrix 129.66 ±0.9566 2.87 4 Labeo rohita 84.33 ±0.6833 2.05 5 Wallago attu 154.33 ±1.64 4.92

125 Table 9(a) Comparison of gill rakers of five different Fishes S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 6+10first arch 6+10first arch 6+10first arch 2 Puntius Javanicus 17 17 17 3 Hypophthalmicthys Molitrix 74 50 72 49 70 50 4 Labeo rohita 38 34 34 5 Wallago attu . – 7 – 24 – 6 –23 – 5 – 19 Table 10(a) Comparison of length of Vertebral Column. S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 2rows(Both) 2rows(Both) 2rows(Both) 2 Puntius javanicus – ( ) – ( ) – ( ) – ( ) – ( ) – ( ) 3 Hypophthalmicthys molitrix – ( ) – ( ) – ( ) – ( ) – ( ) – ( ) 4 Labeo rohita 5( ) 4( ) 3( ) 3( ) 4( ) 5( ) 5 Wallago attu X(No. Unobserved X X

126 Table 9(b) Statistical Analysis of Gill rakers S.No. Fish Name Mean- of gill raker Standard Error Standard Deviation 1 Ctenopharyngodon idella 16 ± 0 0 2 Puntius Javanicus 17 ± 0 0. 3 Hypophthalmicthys Molitrix 12.167 ± 0.5666 1.7 4 Labeo rohita 35.33 ± 0.63 1.89 5 Wallago attu 28 ± 0.98 2.94 Table 10(b) Statistical Analysis of Pharyngeal teeth. S.No. Fish Name Mean- Phr. theeth Standard Error Standard Deviation 1 Ctenopharyngodon idella 14 ±0 0 2 Puntius javanicus 7 ±0 0 3 Hypophthalmicthys molitrix 7 ±0 0 4 Labeo rohita 4 ±0.9071 0.82 5 Wallago attu X X X

127 Table 11(a) Comparison of Vertebrae of five different fishes S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella – – – – – – 2 Puntius javanicus – – – – – – 3 Hypophthalmicthys molitrix – – – – – – 4 Labeo rohita – – – – – – 5 Wallago attu – – – – – – N.B.- T denoted for – Trunk Vertebrae C denoted for – Caudal Vertebrae

128 Table 12(a) Comparison of Fin -Rays of five different fishes S.No. 1 S.No. 2 S.No. 3 S.No. 4 S.No. 5 Name of fish Name of fish Name of fish Name of fish Name of fish Ctenopharyngodon idella Puntius javanicus Hypophthalmicthys molitrix Labeo rohita Wallago attu Fin Rays No. of Fish Exam Fin Rays No. of Fish Exam Fin Rays No. of Fish Exam Fin Rays No. of Fish Exam Fin Rays No. of Fish Exam 1st 2nd 3 rd 1st 2nd 3rd 1st 2nd 3rd 1st 2nd 3rd 1st 2nd 3rd Dorsal 10 10 10 Dorsal 8 7 7 Dorsal 10 10 10 Dorsal 14 14 12 Dorsal 5 5 5 Anal 8 8 7 Anal 6 5 5 Anal 17 12 12 Anal 7 5 5 Anal 93 88 74 Caudal 12 10 11 Caudal 16 14 13 Caudal 21 20 18 Caudal 19 19 19 Caudal 17 17 17 Pelvic 18 17 17 Pelvic 15 14 14 Pelvic 10 10 10 Pelvic 18 16 16 Pelvic 7 7 6 Pectoral 9 8 8 Pectoral 9 8 8 Pectoral 17 17 17 Pectoral 9 7 7 Pectoral 15 15 13

129 Table 11(b) Statistical Analysis of Vertebrae S.No. Fish Name Mean - Vertebrae Standard Error Standard Deviation 1 C. idella 34.67 ±0.6866 2.06 2 P. javanicus 36 ± 0.2733 0.82 3 H. molitrix 39 ± 1.44 4.32 4 L. rohita 22.33 ± 0.4166 1.25 5 W. attu 71 ± 1.277 1.63 Table 12(b) Statistical Analysis of Fin-Rays S.No. Fish Name Mean – Fin-Rays Standard Error Standard Deviation 1 C. idella 54.33 ±0.63 1.89 2 P. javanicus 49.67 ± 1.03 3.09 3 H. molitrix 70.33 ± 1.13 3.39 4 L. rohita 62.33 ± 1.13 3.39 5 W. attu 128 ± 3.13 9.

130 Table 13(a) Comparison of Transverse line scales of five different Fishes S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella /// 2 Puntius javanicus /// 3 Hypophthalmicthys molitrix /// 4 Labeo rohita /// 5 Wallago attu /// Table 2(a) Comparison of Head length of five different Fishes S.No Number of Fish No of fish examined 1-st 2-nd 3-rd 1 Ctenopharyngodon idella 28 mm 26 mm 24 mm 2 Puntius javanicus 25 mm 24 mm 23 mm 3 Hypophthalmicthys molitrix 30 mm 32 mm 28 mm 4 Labeo rohita 20 mm 15 mm 12 mm 5 Wallago attu 60 mm 50 mm 40 mm

131 Table 13(b) Statistical Analysis of Transverse line scales S.No. Fish Name Mean – Tr. Line Scales Standard Error Standard Deviation 1 C. idella 1.22 ±0 0 2 P. javanicus 1.26 ± .8561 0.73 3 H. molitrix 1.22 ± 0 0 4 L. rohita .92 ± 0 0 5 W. attu 1.29 ± 0 0

132 Table 14(a) Comparison of Meristic Characters of five different Test species Characters No. (Total Fishes) Number of Fishes F-Value Significance C. idella P. javanicus H. molitrix L. rohita W. attu Total Length 15 3 3 3 3 3 5.3763637 * Head Length 15 3 3 3 3 3 5.2442169 * Max. girth of skull 15 3 3 3 3 3 24.933762 * Lateral Line scale 15 3 3 3 3 3 23.199162 NS Transverse Line scale 15 3 3 3 3 3 235.08426 NS Length of skull on its dorsal aspect 15 3 3 3 3 3 42.686988 NS Length of max bone 15 3 3 3 3 3 97.8125 NS Length of Ventral aspect of opercular bone 15 3 3 3 3 3 5.1995341 * length of Vertebral column 15 3 3 3 3 3 230.62314 NS Gill Raker 15 3 3 3 3 3 2.0031538 * Phr. Teeth 15 3 3 3 3 3 0.4069402 Highly Significant Vertebrae 15 3 3 3 3 3 10.16966 NS Fin Rays 15 3 3 3 3 3 0.465845 Highly Significant NS Not Significant * Significant at 1% level ** Significant at 5% level

133 Table 16(a) Statistical Correlation of Total length of CTENOPHARYNGODON IDELLA and its head length T.L(
This is a perfect Correlation between total length and head length. Table 16(b) Correlation of Total length of CTENOPHARYNGODON IDELLA and its Max. girth of skull T.L(
r =1 :
This is a perfect Correlation = ∑ √∑ 2 ∑ 2 = 12 √18 8 = 12 √144 = 12 12 = 1

134 Table 16(c) Correlation of Total length of CTENOPHARYNGODON IDELLA and its lateral line scales . T.L(
r = 1 .:
Perfect Corelation Table 16(d) Statistical Correlation of Total length of CTENOPHARYNGODON IDELLA and its length of skull on its dorsal aspect. T.L(
Perfect Corelation

135 Table 17(a) Correlation of Total length of PURNIUS JAVANICUS and its head length T.L(X) (X-¯)(dx) dx 2 H.L.(Y) (Y-¯)(dy) dy 2 dx.dy 140 4 16 25 1 1 4 135 -1 1 24 0 0 0 132 -4 16 23 -1 1 4 dx = 0 x 2 = 18 dy = 0 2 = 2 . y = 8 r =0.99.: Perfect Corelation Table 17(b) Correlation of Total length of C. idella and its max. grith of skull T.L(X) X-136(dx) dx 2 M.G.S.(Y) (Y-¯) (dy) dy 2 dx.dy 140 4 16 24 1 1 4 135 -1 1 23 0 0 0 132 -4 16 22 -1 1 4 dx = 0 x 2 = 18 dy = 0 2 = 2 . y = 8 r =0.99.: Perfect Corelation

136 Table 17(c) Correlation of Total length of PURNIUS JAVANICUS and its Lateral lines scales. T.L(X) (X-136)(dx) dx 2 L.L.S(Y) Y-30(dy) dy 2 dx.dy 140 4 16 31 1 1 4 135 -1 1 29 -1 1 1 132 -4 16 29 -1 1 4 x = -1 x 2 = 33 2 = 3 . y = 9 r =.93 .: Perfect Correlation Table 17(d) Correlation of Total length of PURNIUS JAVANICUS and its dorsal aspect T.L(X) (X-136)(dx) dx 2 D.A.(Y) Y-37(dy) dy 2 dx.dy 140 4 16 40 3 9 12 135 -1 1 36 -1 1 1 132 -4 16 33 -4 16 16 x = -1 x 2 = 33 y = -2 2 = 26 . y = 29 r = 0.99 Therefore there is a perfect correlation between total length and its length of skull on its dorsal aspect

137 Table 18(a) Correlation of Total length of H. molitrix and its head length T.L(X) (X- 171)(dx) dx 2 H.L.(Y) (Y-30)(dy) dy 2 dx.dy 170 -1 1 20 0 0 0 175 4 16 32 2 4 8 168 -3 9 28 -2 4 6 x = 0 X 2 = 26 y = 0 Y 2 = 8 X. Y = 14 r =0 .97.: Perfect Corelation There is a perfect Corelation between total length and its Head length of H.molitrix Table 18(b) Correlation of Total length of H. molitrix and its max. girth of skulls T.L(X) (X- 171)(dx) dx 2 M.G.S(Y) (Y- 29)(dy) dy 2 dx.dy 170 -1 1 29 0 0 0 175 4 16 31 2 4 8 168 -3 9 27 -2 4 6 x = 0 X 2 = 26 y = 0 Y 2 = 8 X. Y = 14 r = 0.97 There is a perfect correlation between total length and its Max girth of skulls of H.molitrix

138 Table 18(c) Correlation of Total length of H. molitrix and its lateral line scales T.L(X) (X-171)(dx) dx 2 L.L.S(Y) (Y- 113)(dy) dy 2 dx.dy 170 -1 1 112 -1 1 1 175 4 16 115 2 4 8 168 -3 9 110 -3 9 9 x = 0 x 2 = 26 y = -2 2 = 14 . y = 18 r = 0.99.: Perfect Corelation There is a perfect Correlation between total length and its lateral line scales of H. molitrix Table 18(d) Correlation of Total length of H. molitrix and its dorsal aspect T.L(X) (X-171)(dx) dx 2 L.L.S(Y) (Y-31)(dy) dy 2 dx.dy 170 -1 1 30 -1 1 1 175 4 16 33 2 4 8 168 -3 9 28 -3 9 9 x = 0 x 2 = 26 y = -2 2 = 14 . y = 18 r = 0.99 There is a perfect correlation between total length and its dorsal aspect of skulls of H. Molitrix.

139 Table 19(a) Correlation of Total length of L. rohita and its head length T.L(X) (X- 105)(dx) dx 2 H.L.(Y) (Y-16)(dy) dy 2 dx.dy 110 5 25 20 4 16 20 105 0 0 15 -1 1 0 100 -5 25 12 -4 16 20 x = 0 x 2 = 50 y = -1 2 = 33 . y = 40 r =0 .989. There is a perfect Correlation between total length and its Head length of L.rohita Table 19(b) Correlation of Total length of L. rohita and its max. girth of skulls T.L(X) (X-105)(dx) dx 2 M.G.S(Y) Y-15(dy) dy 2 dx.dy 110 5 25 19 4 16 20 105 0 0 14 -1 1 0 100 -5 25 11 -4 16 20 x = 0 x 2 = 50 y = -1 2 = 33 . y = 40 r = 0.989 There is a perfect correlation between total length and its Max girth of skulls of L.rohita

140 Table 19(c) Correlation of Total length of L. rohita and its lateral line scales T.L(X) (X-105)(dx) dx 2 L.L.S(Y) (Y-42)(dy) dy 2 dx.dy 110 5 25 44 2 4 10 105 0 0 42 0 0 0 100 -5 25 40 -2 4 10 x = 0 x 2 = 50 y = -0 2 = 8 . y = 20 r = 1.: Perfect Corelation There is a perfect Correlation between total length and its lateral line scales of L.rohita Table 19(d) Correlation of Total length of L. rohita and its dorsal aspect T.L(X) (X-105)(dx) dx 2 D.A.(Y) (Y-17)(dy) dy 2 dx.dy 110 5 25 20 3 9 15 105 0 0 17 0 0 0 100 -5 25 15 -2 4 10 x = 0 x 2 = 50 y = 1 2 = 13 . y = 25 r = 0.99 There is a perfect correlation between total length and its dorsal aspect of skulls of L.rohita

141 Table 20(a) Correlation of Total length of Wallago attu and its head length T.L(X) (X-327)(dx) dx 2 H.L.(Y) (Y-50)(dy) dy 2 dx.dy 360 33 1089 60 10 100 330 320 -7 49 50 0 0 0 300 -27 729 40 -10 100 270 x = -1 x 2 =1867 y = 0 2 = 200 . y = 600 r =0 .98. There is a perfect Correlation between total length and its Head length of Wallago attu. Table 20 (b) Correlation of Total length of Wallago attu and its max. girth of skulls T.L(X) (X-327)(dx) dx 2 M.G.S(Y) Y-49(dy) dy 2 dx.dy 360 33 1089 59 10 100 330 320 -7 49 49 0 0 0 300 -27 729 39 -10 100 270 x = 0 x 2 = 1867 y = 0 2 = 200 . y = 600 r = 0.98 There is a perfect correlation between total length and its Max girth of skulls of Wallago attu.

142 Table 20 (c) Correlation of Total length of Wallago attu and its lateral line scales T.L(X) (X-327)(dx) dx 2 L.L.S(Y) (Y-41) (dy) dy 2 dx.dy 360 33 1089 42 1 1 33 320 -7 49 40 -1 1 7 300 -27 729 40 -1 1 27 x = -1 x 2 = 1867 y = -1 2 = 3 . y = 67 r = 0.94.: Perfect Corelation There is a perfect Correlation between total length and its lateral line scales of Wallago attu. Table 20 (d) Correlation of Total length of Wallago attu and its dorsal aspect T.L(X) (X-327)(dx) dx 2 D.A.(Y) (Y-38)(dy) dy 2 dx.dy 360 33 1089 40 2 4 66 320 -7 49 38 0 0 0 300 -27 729 35 -3 9 81 x = -1 x 2 = 1867 y = -1 2 = 13 . y = 147 r = 0.95 There is a perfect correlation between total length and its dorsal aspect of skulls of Wallago attu.

143 Table 21 Analysis of variance of Total length of experimental fishes Sample 1 Sample 2 Sample 3 Sample 4 Sample 5 Use of ANOVA Table Source of Variation Sum of Squares Degree of Freedom Mean Square Between Samples 88087.59 4 22009.25 Within Samples 1993.34 10 199.334 Total 90080.93 14 F= 22009.59 199.34 = 110.40 (Not Significant)

144 Table 22 Analysis of variance of Head length of experimental fishes Sample 1 Sample 2 Sample 3 Sample 4 Sample 5 ANOVA Table Source of Variation Sum of Squares Degree of Freedom Mean Square Between Samples 1961.07 4 490.26 Within Samples 250.67 10 25.07 Total 2211.74 14 F= 490.26 25.07 = 19.56 (Not Significant)

145 Table 23 Analysis of variance of length of max bone of experimental fishes Sample 1 Sample 2 Sample 3 Sample 4 Sample 5

ANOVA Table Source of Variation Sum of Squares Degree of Freedom Mean Square Between Samples 5.07 4 1.27 Within Samples 1.33 10 0.133 Total 6.4 14 F= 9.548 Significant

146 Table 24 Analysis of variance of Length of ventral aspect of opercular bone. Sample 1 Sample 2 Sample 3 Sample 4 Sample 5

ANOVA Table Source of Variation Sum of Squares Degree of Freedom Mean Square Between Samples 40.93 4 10.2325 Within Samples 2 10 0.2 Total 42.93 14 F= 10.23 2 = 51.15 (Not Significant)

147 CHAPTER - 4 Discussions

148 Discussions The entire body of a fish as of many other vertebrates is supported by frame work of connective tissue which packs and binds the various parts together and rearch for the attachment of muscles. These frameworks are made up of endoskeleton of both chondrocranium (skull and appendicular skeleton The typical fish skull or cranium is generally recognised to be composed of two sharply contrasting divisions which may be called the neurocranium or brain case and branchiocranium. The appendicular skeleton however consists of vertebrates. teeth. fin-rays, pectoral and pelvic girdles etc. For information as to the evolution of the adult skull of any particular type, we must therefore seek to understand both its adult functions and its developmental history; we must compare it with less specialised skulls of its own group and assemble the available palaeontological evidence as to its pervasion In our endeavour to describe the habits of an individual fish from its skeleton we look first at the jaws and teeth, the position and direction of the mouth, the pharyngeal gill etc. which tell us whether the fish was typically either predaceous or a plankton feeder, a mibbler, a pincers fish, a prusner of bivalves and crustaceans, and crustaceans, a much grubbling sucking type or an animated fish trap. In connection with inquiries into the evolutionary history of any given type of fish skull, it is important to realize that the habitus (or totality of heriditary adaptations to a given

149 way of life) in the ancestor becomes the phylogenetic "heirtage" of its descendant (Gregory' 1913). For example, the predaceous habitus of the predaceous habitus of the an-cestral period becomes the phylogenetic heritage of such specialized forms as the beaked parrot wrasses, the nibbling balistids the trap-mouthed anglers and many others. In other words, the earlier functions and structures of the predaceous habitus had to be modified progressively away from this relatively primitive conditions out traces of these earlier habitus characters may still be seen in many basic features of the branchiocranium and neurocranium of even the most specialized teleosts. From all these emerges the generalization that the food and feeding habits of fishes must have brought the skeletal changes in the fishes which is quite true in the five different fishes under study. de Beer (1838) also demonstrated that the development of bony skull is preceded by the cartilaginous chondrocranium. Considerable amount of work has been done on teleosts fishes. The five different species of fishes have also been investigated for their detail skull peculiarties along with the changes in the appendicular skeleton. During the course of present study, the neurocranium and branchiocranium along with appendicular skeleton of C. idella, P. javanicus. H. molitrix, W. attu and L. rohita have been studied. The different parts and characters which have been studied have been disscussed under the following heads 1. Head length 2. Max. girth of the skull 3. Length of skull on its dossal aspect

150 4. Len. of max. bone 5. Length. of Ven. aspect of opercular bone along with the following appendicular characters (1) Length of vertebral column (2) Gill Raker (3) Phr. teeth (4) fin Rays (5) Lateral and transverse line Scales (6) Ribs There parameters have been analysed statistically with the total length of the fishes. (1) Head length- The head length as observed for five different fishes indicateithat W. attu showed the maximum length of head followed by H.molitrix. The length of head therefore seemed to be on the pattern of the total length of fish because the total length of W. attu was maximum (326.67 +8.31 d mm. followed H.molitrix 171.0 +0.98mm. Therefore it apper that length of the head is very much relevant with the total length of fish. Hopkirik (1973) pointed out that morphomeristic characters are not very useful in problems of sub speciation and geographical variation because the body measurement in fishes vary greatly, depending on their sex, age, length and habitat. Mayr, Lindslay, Usigner (1953) also describe, that comparison of proportion means with statistical analysis such as the cofficient of difference value are valid only when isometric pattern of relative growth exists between body part and body length, and when the measurement are in

151 normal distribution. Therefore the body length of the fishes is quite relevant with the morphomeristic characters and length of the skull seems to be quite only lines as reported by these workers. Grey (1955) is of the opinion that the morphomeristic characters should be plotted graphically to make a visual comparison of experimental data. The observed value and mean of these three morphomeristic characters i.e., length of body, maximum and minimum girth of skull, mean length of head as computed in the table 1 to 3 were analyzed statistically usually on the same pattern as suggested by Grey. However, these had not being worked out the detail feeding habit of five different fishes as reported by Grey in his observation. (2) Maximum girth of skull The mean value of the data computed in Table-3 would speak of the maximum girth of a skull of five different fishes. The maximum girth values showed that it was maximum in case of W.attu (49.0± f2.72). This was followed by H.molitrix (29.0±1.277mm.). Chondar (1976) while describing the meristic and non-meristic characters of races of Gadusia chapra mentioned very clearly that maximum and minimum girth of a skull and head length differs greatly in two fishes of the same species inhabiting in two different habitats. He had mentioned that the head of Gadusia was slightly longer than that of the Ganga in all the stages presented through different length groups. This is quite true in case of the present study where not only the body length is directly proportionate to the length of skull but it does exhibit the same pattern regarding the maximum girth of skull.

152 (3) Length of a skull on its dorsal aspect: Length of a skull when analysed bio-statistically shows maximum length in W. attu (37.66 ± 0.6866 mm.) This was followed by P.javanicus , showing the length of a skull about 36.33±0.9533mm. whereas the length of a skull in H.molitrix was less than the P.javanicus though the fish was measured in total body length of 171.0±0.98 which is < 135.67±1 .1 mm. the total length of P. javanicus. These therefore indicates that the length of body is not very much co-rrelated with the total length of skull as far as its dorsal aspect is concerned. Here the statement seems to be quite similar with the views expressed by Sugunan (1971) who measured the morphology of the skull of Megalespis cordyla and mentioned that skull shows certain progressive characters like the reduction of circum orbital bone, exclusion of maxillay from the gape of the mouth and the presence of a well developed myotome. Ridewood (1904) mentioned much earlier that the meeting of the two parietal bones in the medianlines is upon palaeontological grounds, a more primitive condition than the separation of these bones by the supra occipital. He made the same observation with regards to the skull of Mugil, Chan (1970) also reported the different kind of ridgers of skull of Lutijanus altifrontalis.He mentioned that at the upper surface of the cranium three pairs of grooves are seen which extend up to the olfactory region. Thus accounts very much for the length of skull. Gregory (1951) describe that smallest group• Is found in the side of skull which is very much helpful in swimming. Sugunan (1971) mentioned the complete separation of the parietals by the supra occipital bone in M.cordyla. Chondar (1984) also reported the skull bones measurement

153 analysed by D2 method in the fish of G.chapra inhabiting in Ganga river and Keetham reservoir. He had mentioned that although fish has intermediate group but the growth of the skeletal part of the skull become-much restricted after the fish attain a certain size age. In G. chapra it was noticed that the growth of the head bones seems to be very slow after the attainment of the fish in 90 mm. total length. Thus it is expected that the growth of the skull on its dorsal aspect of the-skutl fivedifferent fishes under study got rather restricted after attaining a particular size of the total length of the body. This is the reason that P. javanicus showed 36.33±0.953mm. of length of skull as compared to H. molitrix whose length of skull was measured only 30.331±0.833 mm. though in length H. molitrix is more than the P. javanicus. (4) Maxillary Bone: Maxillary bone in a fishes is a thin long anteriorly joined its c unter parts to form beak shaped structure. Maxilla of eye side participates in forming the posterior edge of upper lip. In the present study the statistical analysis was carried out for themmeasurement of the mean length of maxillary bone of five different fishes as indicated in Table-6 it appeared that H.Molitrix showed maximum mean length of maxillary bone 3.66 mm. this is followed by 3and 2mm length is rest of the fishes. There seens to be no correlation regarding the maxillary bone length and the total length of the body. Whitehead (1965) in the , genus Hilsa described two supra maxillary lying along the dorsal margin of the maxilla. The second or posterior supramaxilla is expanded and was found pebble shaped. He had mentioned that no difference was found in the size or shape of maxillary bone of two sub genera of the fishes. In the present study also the maxillary bone 154 where found almost similar in length irrespective of the length of the body of the fish. 5) Opercular bones- Statistica analysis of data revealed the maximum length of opercular bone in W. attu (7.67±0.1 6 mm) followed by L.rohita (6.33±0.1566 mm.) . In H.molitix and C. idella it was almost equal. Chondar (1979) while describing the osteology of chapra entioned that the opercularseries is formed with the opercular, series is formed with the operculum sub-operculum, the inter operculum and the preoperculum on either side of the gill cover. The author has mentioned that in G. chapra the lower operculum margin when drawn posteriorly intersect-Its dorsal profile of the body before the base of third ray of the dorsal fin. However, Whitehead (1965) furnished that hypothetical line intrsects the dorsal profile near or infront of the dorsal origin. Day (1878) in his pioneer report also mentioned that the shape of sub-operculum and maxillary bone differ greatly in different species of fishes. The genus Gudusia shows as assemblage with the genus Hilsa as far as opercular bone characters' is concerned. The present study though does not account much details of the opercular bones what as far as the len th of the opecular bones of five different fishes are concerned it supports the views expressed by Day (1878) Whitehead (1965) and Chondar (1979) Sugunan (1971) in M.cordyla also describes the opercular bones as thin light translucent structure found in the skull. The upper portion of the opercular bones provide facet for the origin of the dilator operculi.

155 (6) Transverse line Scales: The transverse line stales were maximum in W.attu follwed by P.javanicus < C.idella < and H. molitrix < L..rohita.) These generally follows the trend of total length of body of fishes.lt is quite evident from Table l and 13 that maximum length of 326.67± 8.31 mm. fish was measured in case of W. attu followed by H. Molitrix and C. idella. Almost similar pattern have been followed in the distribution of transverse line scales reporting maximum number in W. attu followed by P. javanicus and almost equal in number in C.idella and H. molitrix. The length of the last two fishes were 1 71 ±0.98 and 1 67±1 .73 mm. which is almost at the same range. This shows that length of the body is very much correlated with the Transverse line scales regarding five different fishes. (7) Lateral Line Scales The lateral line scales when analysed bio-stastically showed the maximum and minimum number of scales on the lateral line of the fish H. molitrix and P. javanicus, which were recorded to be 112.33±0.683 and 29.67±0.31 6. These shows that the total body length is not much related on the scales present on the lateral line. Similar observatiory have also been recorded by Chondar (1976) in the G. chapra of two different stocks. He has analysed the data using 't' test and mentioned that lateral line scales was not significant between the two stocks. How ever, he did not correlate the number of lateral line scales with the total body length of the fish as observed in present study (tables 4 and 1)

156 (8) Vertebrae and Vertebral Column The data mentioned in table 8 and 11 revealed the length of vertebral column as well as the number of vertebrae of five different fishes. The length of vertebral column was found to be maximum 154.33±1.64 mm. in W .attu followed by H. molitrix (129.66±0.956mm) The rest three fishes were in the order of C.idella < P. javanicus< L. rohita. The length of vertebral column when compared to the mean length of the body shows direct correlation between these two parameters. The maximum length of the body, the maximum length of vertebral column was noticed as it is quite evident from data mentioned in table No. 8 and 1 . The number of vertebrae in the vertebral Column of fishes that maximum and minimum in W. attu and L. rohita respectively. The maximum number were 71 ±1.27 where as the minimum were 20.33±0.41 6. Number of authors have worked on the vertebral column vertebrae and other osteological aspects. The available records, from Day (1878) . Mishra (1959) , Moona (1959) ; Whitehead (1965), Chondar (1976). Chondar (1976) reported that the marked differences existed in the percentage frequency values of different types of vertebrae except the caudal vertebrae. However Lindsey (1961) stated that counting of meristic characters is a convenient looking for evidence of population segregation. Kesteven (1950) mentioned that the finrays, Lateral line scales and Transverse line scales and Scutes are not satisfactory character as these have not led to any definite conclusions.

157 (9) Gill rakers The number of gill rakers in lower and upper limbs of the left first gill arch of various length groups of fishes obtain were depicted in comparative form in Table 9. The number of gill rakers generally increases with the increase in size of fishes. The mean number of gill rakers in five different fishes were found maximum in L. rohita followed by W. attu (35.3 ±0.63 and 28±0.98). Chondar (1976) also measured the gill raker number in the mean value both the lower and upper limbs in different length group specimen of Gadusia and noticed that gill of Keetham, Gadusia was more than Ganga's Gadusia. (10) Fin Rays Number of Fin-Rays were found maximum in W. attu and minime in P. javanicus. The number were 128±3.13 and 49.67 ±1.03 respectively in both the fishés. These shows that the number of finrays is more or less dependent on the length of the body of particular fish. Chondar (1976) described the dorsal and anal finrays in Gadusia where he observed marked differences between the two populations between the percentage frequency distribution of fin-rays. Variation in the fin-rays number has selective advantage and are apparently related to the selection for certain hydrodynamic features that allows for existence in first moving water. The same statement was made by Chondar (1976) who reported that comparatively smaller sized anal fin with less number of fin-ray of the Ganga Gadusia might be for its adaptation to the lotic habitation and propulsion through first moving water. Hopkirk (1973) also mentioned that differences in the gill rakers and variation in the finrays numbers are the few prominent meristic characters for the analysis of the

158 races of the various fishes which seems ito be quite true with the light of the present observation as out of the five different fishes none showed the same number of finrays and gill rakers. (11) Pharyngeal teeth The mean number of pharyngeal teeth were found to be maximum in C. idella (14) followed by P. javanicus and H.molitrix. L.rohita showed the minmum number of pharyngeal teeth that is 4. In Wallago attu no pharyngeal teeth were observed. Relationship of vertebral column and weberian ossicles and importance of weberian ossicles in systematics and interrelationship of fishes. The weberian ossicles consist of a pair of ossigle chains one on either side of the vertebral column connecting the internal ear with the anterior chamber of air bladder. Each chain is composed of three bony elements, the scaphium, intercalarium and tripus, alligned antero-posteriorly. The scaphium intercalarium are very delicate, while the tripus is well developed. The scaphium consists of an ascending and a horizontal process united at right angles. The ascending process is embeded in the fibrous wall of neural canal behind the neural plate of exoccipital. It is poorly developed and is in the form of a curvedspicule with a finely pointed upper end. The horizontal process is comparatively prominent and forms mainpart of the ossicle, which passes forward from lower end of the ascending process. It terminates at the front end into a spoon-like expansion, which closes the external atrial aperture at the end of exoccipital. At the junction of ascending and horizontal processes

159 on the inner side of ossicle is a spherical nodule, which moves in a socket along its side at the hind end of basioccipital. The intercalarium is reduced to a nodule, which lies in the interossicular ligament and covers its full width. The inter ossicular ligament covers its full width. The interossicular ligament is short and extends out from outerside of the horizontal process of scaphium to the anterior extremity of tripus. The tripus is the largest ossicle of the series and lies on outerside of the exoccipital and the first and complex vertebra. It is dorso-ventrally flattened and is divided into an anterior and a posterior part. The anterior part runs along outer side of the exoccipital, first vertebra and anterior one-third of complex vertebra. Its external margin is slightly convex and the internal slightly concave. The posterior part also known as crescentic or transformator process is horse-shoe shaped and it easily breakes off from the rest ossicle. The part lies in the tunica externa of anterior chamber of the air bladder with its concavity directed along the outerside of the rest of complex vertebra. From innerside of the ossicle at about the junction of the anterior and posterior parts is given off a triangular articular process, which articulates with the complex vertebra. Along the ventral side of tripus is an obliquely directed ventral ridge which runs from the porterior part to the articular process. The anterior part and the articular process of the tripus and intercalarium and part of interossicular ligament between the tripus and intercalarium are contained in the saccus paravertebralis, which is a thin- walled fibrous sac filled with a colour less fluid. The sac runs on its side along lateral aspect of the exoccipital, first vertebra and anterior one third of

160 complex vertebra extended from the atrial aperture to the insertion orcf eporterior part of the tripus in the air bladder behind. The weberian ossicles are concerned with the transmision of vibrations received from the surrounding medium through the lateral cutaneous areas of skin in the airbladder to the internal ear. The absence of muscle from the lateral cutaneous areas reduces independence of the body wall to the reception of vibrations. The vibrations acquaint the fish with varying degrees of pressure to which the bladder is subjected and is a register for varying hydrostatic pressure. The increase in volume of the anterior sac of bladder brings about rotation of bladder, brings about rotation of the tripodes forward and the decrease in volume results in their movement backward. The movement of tripodes are transmitted through the intercalaria to scaphia. The movement of scaphia causes the movement of fluid in the sinus endolymphaticus and endolymphatic ducts and is ultimately brings about deflection of the saccular otoliths. The experiments show that the destruction of weberian apparatus results in insensibility to vibrations in an ostariophysian fish. These fishes hear high frequency sounds through the weberian ossicles. It is demostrated that the sacculus and lagena of cyprini and siluri are adapted only to the reception of sound vibrations conveyed by these ossicles. Different workers have described the homologies of weberian ossicle with various parts of the body. Such as Watson (1939), Hora (1922) described that Weberian ossicle in form due to ossification from the wall of atrium sinus imparies. The homology of weberian ossicles still seems to be quite uncertain.

161 CHAPTER - 5 Summary

162 Summary ? In the present study a research was undertaken to describe the five morphologically different but genotypically rather closely resembled group of fishes including the Osteology along with comparative systematic positions. ? The five different fishes whose morphological and osteological characters have been studied are the following Ctenopharyngodon idella Labeo rohita Puntius javanicus Wallago attu Hypophtalmicthys molitrix In Chapter – 1 the author described the introduction and Review of literature In Chapter – 2 the materials and methods are illustrated. The analysis of Bio- statistical Data is calculated with the help of the methods- Mean, Mode, Standard Deviation, Correlation Analysis and analysis of Variance. In Chapter – 3, the Description of skulls and appendicular bones of all the FIVE fishes is done i.e. Ctenopharyngodon idella, Labeo rohita, Puntius Javanicus, Wallago attu and Hypophthalmicthys Molitrix. Neurocranium (occipital region, Orbital region, Auditory region, Sphenoidal region, Ethmoidal region) , Branchiocranium, (Oramandibular region, opercular bone, Hypobrachial skeleton), Vertebral Column (Traunk and Caudal region) Appendicular Skeleton

163 (Pectoral girdle and Pelvic girdle and fins, median, dorsal anal and caudal fins) and Ribs of all FIVE fishes are observed and described. The comparison of Total Length and Head Length of All the 5 fishes are observerd in this chapter. The statistical analysis of length of experimental fishes, Head Length, maximum girth of skull, lateral line scales, comparison of length of skull, length of maxillary bone, analysis of dorsal skull, opercular bone, vertebral column, gill rakers, pharyngeal teeths, no. of vertebrae, fin ray, transverse line scales comparison of meristic chaptes his statistical correlation of all the above chapters are observed and displayed in this chapter. Analysis of variance of different p---------- are also observed. In Chapter 4, the discussion is dealt with During the course of present study the neurocranium and branchiocranium along with appendicular skeleton of C. idella, P.javanicus. H. molitrix, W. attu and L.rohita have been studied. The different parts and characters which have been studied have been disscussed under the following heads 1. Head length 2. Max. girth of the skull 3. Length of skull on its dossal aspect 4. Len. of max. bone 5. Length. of Ven. aspect of opercular bone along with the following appendicular characters (1) Length of vertebral column (2) Gill Raker (3) Phr. teeth

164 (4) fin Rays (5) Lateral and transverse line Scales (6) Ribs The mean value of the data computed would speak of the maximum girth of a skull of five different fishes. Length of a skull when analysed bio-statistically shows maximum length in W. attu (37.66 $\pm$ 0.6866 mm.) Maxillary Bone . In the present study the statistical analysis was carried out for themmeasurement of the mean length of maxillary bone of five different fishes Opercular bones- Statistica analysis of data revealed the maximum length of opercular bone in W. attu (7.67$\pm$0.1 6 mm) followed by L.rohita (6.33$\pm$0.1566 mm.) . In H.molitix and C. idella it was almost equal. The present study though does not account much details of the opercular bones what as far as the len th of the opecular bones of five different fishes are concerned Transverse line Scales: The transverse line stales were maximum in W.attu follwed by P.javanicus < C.idella < and H. molitrix < L..rohita.) This shows that length of the body is very much correlated with the Transverse line scales regarding five different fishes. Lateral Line Scales The lateral line scales when analysed bio-stastically showed the maximum and minimum number of scales on the lateral line of the fish H. molitrix and P. Javanicus

165 Vertebrae and Vertebral Column The data revealed the length of vertebral column as well as the number of vertebrae of five different fishes. The length of vertebral column was found to be maximum 154.33±1.64 mm. in W .attu followed by H. molitrix (129.66±0.956mm) The rest three fishes were in the order of C.idella < P. javanicus< L. rohita Gill rakers The number of gill rakers generally increases with the increase in size of fishes. The mean number of gill rakers in five different fishes were found maximum in L. rohita followed by W. attu (35.3 ±0.63 and 28±0.98). Fin Rays Number of Fin-Rays were found maximum in W. attu and minime in P. javanicus. The number were 128±3.13 and 49.67 ±1.03 respectively in both the fishes. Pharyngeal teeth The mean number of pharyngeal teeth were found to be maximum in C. idella (14) followed by P. javanicus and H.molitrix. L.rohita showed the minmum number of pharyngeal teeth that is 4. In Wallago attu no pharyngeal teeth were observed. Relationship of vertebral column and weberian ossicles and importance of weberian ossicles in systematics and interrelationship of fishes. The weberian ossicles consist of a pair of ossigle chains one on either side of the vertebral column. The scaphium intercalarium are very delicate,
166 while the tripus is well developed. The weberian ossicles are concerned with the transmision of vibrations received from the surrounding medium through the lateral cutaneous areas of skin in the airbladder to the internal ear. The experiments show that the destruction of weberian apparatus results in insensibility to vibrations in an ostariophysian fish. These fishes hear high frequency sounds through the weberian ossicles. It is demostrated that the sacculus and lagena of cyprini and siluri are adapted only to the reception of sound vibrations conveyed by these ossicles. Systemic zoology is dependent largely upon the analysis of form. Variations in form usually are analysed in terms of meristic characters and morphometric characters in one population to another. ? The study revealed that as regards the length of the body, W. attu measured the largest fish among all (326.67±8.31) which is followed by H.molitrix(171±.98)<C.idella(167±1.73)< P.javanicus(135.67±1.1) and < L. rohita(105±1.36). ? A considerable difference was noticed in the feeding habits of five species. H. molitrix is a plankrophagus correlation its feeding habit from zoo-phytoplankron from early to adult stages. C. idella is primarily a herbivorous accepting mostly small aquatic vegetation right from the advanced fry stage to various types of aquatic plants in the adults. P. javanicus is an omnivore preferring submerged vegetations besides occasional diet of animal organisms like young stages of molluscs, etc. Labeo rohita is herbivorous and W. attu is varnivorous. So far their feeding niches are concerned the H. Molitrix is surface
167 feeder, c. idella mainly column feeding, and P. javanicus grazes food from the column and bottom zones. L. rohita is column and W. attu and column feeders. ? It has been noticed from the bio statistical data that mean length of head was found to be maximum in W. attu that (50±2.72mm.) followed by H.molitrix(30±1.277mm.) ? It has been Observed from the bio-statistical data that mean length of girth of skull ws maximum in W. attu (.49±2.72mm) and minimum in L. rohita (14.67±1.1mm.) ? It has been moticed from the bio-statistical data that H.molitrix possesses maximum number of lateral line scales (112.33± 0.6833) and minimum counts moticed in P. javanicus. ? The study revealed that length of skull on its dorsal aspect is maximum in w. attu(37.66± 0.6866) and minimum in L. rohita(17.33± 0.6833). ? Bio-statistical data revealed that mean length of maxillary bone is maximum in H.molitrix(3.67±0.16mm.) and minimum in L.rohita.(2.0±0) ? The study revealed that length of ventral aspect of opercular bone was maximum in W. attu (7.67± 0.16mm.) and minimum in P. Javanicus (3.33±.1566). ? Bio-statistical data reveals maximum mean length of ventral column in W. attu(154.33± 1.64) and minimum in L. rohita (84.33± .6833).
168 ? It has been Observed from the bio-statistical data that gill raker showed maximum 3 in Labeo rohita(35.33± .5666) and minimum in C. idella (16±0) ? It has been observed that no. of pharyngeal teeth in C.idella (14±0) was maximum and minimum in L. rohita(4± .9071) ? It has noticed from the bio-statistical data that total number of vertebrae maximum in W. attu (71± 1.277) and minimum in L. rohita (22.33± 0.4166) ? The study revealed that Fin-Rays of five different fishes was maximum in W. attu(128± 1.13) and minimum in P. javanicus (49.67± 1.03) ? It is evidenced from Bio-statistical data that maximum transverre line scales were fund in W.attu (129±0) and minimum in Labeo rohita(.92±0). ? Weberian ossicles and its homologies and its interrelationship with vertebrae discussed. ? The present study therefore made an effort to study the osteology of five different fishes of both axial and appendicular skeleton. The study was substantiated ty bio-statistical analysis of different skull and appendicular skeleton. ? In brief, it can be summarized, that bone chara ter, that is osteological characters are the established and authentic features to know the exact systematic position of the fishes. Further, it shows some importance in the applied Science as well, because before any Cross-breeding is to be performed the osteological features, meristic and morpho-metric
169 characters need to be established. Both these characters are considerably significant for the separation of fish stock and hence shows the application in applied biological sciences.
170 CHAPTER - 6 References

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29% **MATCHING BLOCK 5/33** SA ABHINIT THESIS.doc (D82072375)

consisting of a basal plate forming the floor of the cranium, a large lateral wing-like par-occipital process forming the lateral wall of the cranium, and a small dorsal process to enclose the foramen magnum.

71% **MATCHING BLOCK 6/33** SA Text_Draft All_Chapters_23_December_2019_Plaga ... (D61661706)

its fellow of the opposite side in the midline forming the anterior most bone of the

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it articulates with the maxilla, posteriorly with the ecto-and endopterygoids. The ecto-pterygoids is a thin plate like bone lying immediately behind the palatine. The endopterygoid is a thin, rhomboidal bone lying

35% **MATCHING BLOCK 8/33** SA Text_Draft All_Chapters_23_December_2019_Plaga ... (D61661706)

The metapterygoid is a larger irregular bone lying behind the ecto-and endo-pterygoids. Anteriorly, it articulates with the quadrate, ventrally with symplectic and posterioly with hyomandibular. (Fig. WS) The quadrate is a large, more or less triangular bone

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are a number of investing bones which serve to support the operculum These are opercular, preopercular,

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sabre-shaped branchiostegal rays are attached along the ventral border of the epi and

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a deep groove on its vertral surface, and a posterior stout rod like process which

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is connected with its fellow of the opposite side in the midline

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extending from the anterior tip of the frontal to the hind end of the

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the greater part of the roof of the auditory capsule. It

83% **MATCHING BLOCK 15/33** SA Text_Draft All_Chapters_23_December_2019_Plaga ... (D61661706)

a dorsal pharyngo - branchial, a lateral epibranchial, a ceratobranchial and a small

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a deep groove on its ventral surface, and a posterior stout rod like process which

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Gregory, W.K. 1933. Fish skulls- A study of the evolution of Natural mechanisms. Trans. American Phil. Soc.

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Harrington, R.W.1955. The Osteocranium of the American Cyprinid fish Notropis bifrenatus with an annotated synonym of teleost skull bones . Copeia,

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1/33	SUBMITTED TEXT	16 WORDS	80%	MATCHING TEXT	16 WORDS

the upper jaw is formed of three replacing bones, the
palatine, metapterygoid and quadrate and

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2/33	SUBMITTED TEXT	16 WORDS	65%	MATCHING TEXT	16 WORDS

is a long cross-shaped bone forming greater part of the
floor of the cranium. It

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of the cranial cavity. The prootic is a larger irregular bone forming the antero-mesial wall of the auditory capsule.

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The epiotic is bowl-like forming greater part of the roof of the auditory capsule

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5/33	SUBMITTED TEXT	35 WORDS	29%	MATCHING TEXT	35 WORDS

consisting of a basal plate forming the floor of the cranium, a large lateral wing-like par-occipital process forming the lateral wall of the cranium, and a small dorsal process to enclose the foramen magnum.

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6/33	SUBMITTED TEXT	17 WORDS	71%	MATCHING TEXT	17 WORDS

its fellow of the opposite side in the midline forming the anterior most bone of the

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7/33	SUBMITTED TEXT	32 WORDS	53%	MATCHING TEXT	32 WORDS

it articulates with the maxilla, posteriorly with the ecto- and endopterygoids. The ecto-pterygoids is a thin plate like bone lying immediately behind the palatine. The endopterygoid is a thin, rhomboidal bone lying

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The metapterygoid is a larger irregular bone lying behind the ecto-and endo-pterygoids. Anteriorly, it articulates with the quadrate, ventrally with symplectic and posterioly with hyomandibular. (Fig. WS) The quadrate is a large, more or less triangular bone

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9/33	SUBMITTED TEXT	17 WORDS	62%	MATCHING TEXT	17 WORDS

are a number of investing bones which serve to support the operculum These are opercular, preopercular,

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sabre-shaped branchiostegal rays are attached along the ventral border of the epi and

sabre-shaped branchiostegal rays are attached along the posterior border of the epi- and

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a deep groove on its vertral surface, and a posterior stout rod like process which

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is connected with its fellow of the opposite side in the midline

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extending from the anterior tip of the frontal to the hind end of the

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the greater part of the roof of the auditory capsule. It

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a dorsal pharyngo - branchial, a lateral epibranchial, a ceratobranchial and a small

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the greater part of the roof of the auditory capsule. It

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a deep groove on its ventral surface, and a posterior stout rod like process which

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is connected with its fellow of the opposite side in the (

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X) (X-¯)(x) X 2 M.G.(Y) (Y-¯)(y) Y 2 X.Y 170 3 9 27 2 4 6 167 0 0 25 0 0 0 164 -3 9 23 -2 4 6 X = 501 x = 0 X 2 = 18 Y = 75 y = 0 Y 2 = 8 X.Y = 12

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x x x 68. (x + 2xy3)dx + (1 + 3x2y2 + y)dy = O I 3 4 I 69. y - - y = X y' X dy 3x2J16 + y2 70. = dx y 71. (y + x3y3)

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24/33	SUBMITTED TEXT	182 WORDS	100%	MATCHING TEXT	182 WORDS

X 1 X 1 2 X 2 X 2 2 X 3 X 3 2 X 4 X 4 2 X 5 X 5 2 170 28900 140 19600 170 28900 110 12100 360 129600 167 27889 135 18225 175 30625 105 11025 320 102400 164 26896 132 17424 168 28224 100 10000 300 90000 X 1 = X 1 2 = X 2 = X 2 2 = X 3 = X 3 2 = X 4 = X 4 2 = X 5 = X 5 2 = 501 83685 407 55249 513 87749 315 33125 980 322000

x)[(2+x)2−(2−x)2]−(2−x)[4−x2−4−x2+4x]+(2−x)[4+x2−4x−4+x2]=0 16x+8x2−16x−4x3=0 −4x3+24x2=0 x2(−4+24x)=0⇒

W https://www.toppr.com/ask/question/find-the-solution-set-of-beginvmatrix-2x-2x-2x-2x-2x/

25/33	SUBMITTED TEXT	172 WORDS	100%	MATCHING TEXT	172 WORDS

X 1 X 1 2 X 2 X 2 2 X 3 X 3 2 X 4 X 4 2 X 5 X 5 2 4 16 4 16 4 16 7 49 8 64 4 16 3 9 4 16 6 36 8 64 4 16 3 9 4 16 6 36 7 49 X 1 = X 1 2 = X 2 = X 2 2 = X 3 = X 3 2 = X 4 = X 4 2 = X 5 = X 5 2 = 12 48 10 34 12 48 19 121 23 177

x)[(2+x)2−(2−x)2]−(2−x)[4−x2−4−x2+4x]+(2−x)[4+x2−4x−4+x2]=0 16x+8x2−16x−4x3=0 −4x3+24x2=0 x2(−4+24x)=0⇒

W https://www.toppr.com/ask/question/find-the-solution-set-of-beginvmatrix-2x-2x-2x-2x-2x/

26/33	SUBMITTED TEXT	173 WORDS	100%	MATCHING TEXT	173 WORDS

X 1 X 1 2 X 2 X 2 2 X 3 X 3 2 X 4 X 4 2 X 5 X 5 2 28 784 25 625 30 900 20 400 60 3600 26 676 24 576 32 1024 25 625 50 2500 24 576 23 529 28 784 12 144 40 1600 X 1 = X 1 2 = X 2 = X 2 2 = X 3 = X 3 2 = X 4 = X 4 2 = X 5 = X 5 2 = 78 2036 72 1730 90 2708 57 1169 150 7700

x)[(2+x)2−(2−x)2]−(2−x)[4−x2−4−x2+4x]+(2−x)[4+x2−4x−4+x2]=0 16x+8x2−16x−4x3=0 −4x3+24x2=0 x2(−4+24x)=0⇒

W https://www.toppr.com/ask/question/find-the-solution-set-of-beginvmatrix-2x-2x-2x-2x-2x/

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27/33	SUBMITTED TEXT	172 WORDS	100%	MATCHING TEXT	172 WORDS

X 1 X 1 2 X 2 X 2 2 X 3 X 3 2 X 4 X 4 2 X 5 X 5 2 3 9 3 9 4 16 2 4 3 9 3 9 2 4 4 16 2 4 3 9 3 9 2 4 3 9 2 4 3 9 X 1 = X 1 2 = X 2 = X 2 2 = X 3 = X 3 2 = X 4 = X 4 2 = X 5 = X 5 2 = 9 27 7 17 11 41 6 12 9 27

x)[(2+x)2−(2−x)2]−(2−x)[4−x2−4−x2+4x]+(2−x)[4+x2−4x−4+x2]=0 16x+8x2−16x−4x3=0 −4x3+24x2=0 x2(−4+24x)=0⇒

W https://www.toppr.com/ask/question/find-the-solution-set-of-beginvmatrix-2x-2x-2x-2x-2x/

28/33	SUBMITTED TEXT	19 WORDS	70%	MATCHING TEXT	19 WORDS

Gosline , W.A. 1961 Some Osteological features of modern lower teleo stean fishes. Smithson. misc. Colins, 142(3) :1-42

SA Studies on the cranial osteomyology of some Indian perciform Fishes and taxonomy of ... etc.pdf (D34796607)

29/33	SUBMITTED TEXT	17 WORDS	91%	MATCHING TEXT	17 WORDS

Gregory, W.K. 1933. Fish skulls- A study of the evolution of Natural mechanisms. Trans. American Phil. Soc.

GREGORY, W. K. 1933. Fish skulls; a study of the evolution of natural mechanisms. Trans. Am. phil. Soc. 23: 75-481.

W https://www.vliz.be/imisdocs/publications/267034.pdf

30/33	SUBMITTED TEXT	22 WORDS	90%	MATCHING TEXT	22 WORDS

Harrington, R.W.1955. The Osteocranium of the American Cyprinid fish Notropis bifrenatus with an annotated synonym of teleost skull bones . Copeia,

SA Studies on the cranial osteomyology of some Indian perciform Fishes and taxonomy of ... etc.pdf (D34796607)

31/33	SUBMITTED TEXT	17 WORDS	100%	MATCHING TEXT	17 WORDS

S. 1957. Skeleton of Cyprinoid fishes in relation to phylogenetic studies. 8. The skull and Weberian

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32/33	SUBMITTED TEXT	18 WORDS	100%	MATCHING TEXT	18 WORDS

N. 1925. On the homology of the cranial muscles of the Cypriniform fishes.J. Morph. 40: 1-110.

SA Nikesh Zoology.doc (D51711888)

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M. and Beaufort L. F. De, 1916. The fishes of the Indo-
Australian Archipelago. E.J.Brill Ltd., Leiden. 3

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v/;k; 3 vuqla/kku fØ;kfof/k 100-115 3-1 jkT; dk p;u 100 3-2 vè;;u dh fofèk 101 3-3 vè;;u fofèk 102 3-4 uewuk 103 3-5 Lora= çHkkfor djus okyh oLrq,¡ 105 3-6 MsVk dk laxzg.k 110 3-7 MsVk dk fo'ys"k.k 110 3-8 'kS{kf.kd ruko ds vk;ke 110 3-11 ifjdYiuk;sa 112

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ruko vkSj miyfCèk çsj.kk ds 138
vuqlkj mÙkjnkrkvksa dk forj.k çfr'kr rkfydk 4-11 lhch,lbZ cksMZ yM+fd;ksa vkSj yM+dksa ds chp vdknfed ruko vkSj miyfCèk çsj.kk ds chp lacaèk 141 rkfydk 4-12 tsbZch cksMZ ds ekè;fed Lrj ds Nk=ksa ds chp 'kS{kf.kd ruko vkSj vè;;u dh vknrksa ds chp lacaèk 143 rkfydk 4-13 ekè;fed Lrj ds Nk=ksa esa tsbZch cksMZ ds 200 Nk=ksa ds chp 'kS{kf.kd ruko vkSj vè;;u dh vknrksa ds vuqlkj mÙkjnkrkvksa dk forj.k çfr'kr 144 rkfydk 4-14 tsbZch cksMZ dh yM+fd;ksa vkSj yM+dksa ds chp 'kS{kf.kd ruko vkSj vè;;u dh vknr ds chp lacaèk 146 rkfydk 4-15 lhch,lbZ cksMZ ds mPp ekè;fed Nk=ksa ds chp 'kS{kf.kd ruko vkSj vè;;u dh vknrksa ds chp lacaèk 148 rkfydk 4-16 lhch,lbZ cksMZ ds mPp ekè;fed Nk=ksa ds chp 'kS{kf.kd ruko vkSj vè;;u dh vknrksa ds vuqlkj mÙkjnkrkvksa dk forj.k çfr'kr 149 rkfydk 4-17 lhch,lbZ cksMZ yM+fd;ksa vkSj yM+dksa ds chp vdknfed ruko vkSj vè;;u dh vknr ds chp lacaèk 151
rkfydk 4-18 ekè;fed tsbZch cksMZ ds Nk=ksa ds chp miyfCèk çsj.kk vkSj foQyrk ds Mj vkSj 'kS{kf.kd ruko ds chp lacaèk 154 rkfydk 4-19 tsbZch cksMZ ds mPp ekè;fed Nk=ksa ds chp 'kS{kf.kd ruko vkSj vè;;u dh vknrksa ds vuqlkj mÙkjnkrkvksa dk çfr'kr forj.k 155 rkfydk 4-20 tsbZch cksMZ dh yM+fd;ksa vkSj yM+dksa ds chp miyfCèk çsj.kk vkSj vè;;u dh vknr ds chp lacaèk 157 rkfydk 4-21 lhch,lbZ cksMZ ds mPp ekè;fed Nk=ksa ds chp miyfCèk çsj.kk vkSj vè;;u dh vknrksa ds chp lacaèk 159 rkfydk 4-22 lhch,lbZ cksMZ ds mPp ekè;fed Nk=ksa ds chp vdknfed Vsa"ku vkSj vè;;u dh vknrksa ds vuqlkj mÙkjnkrkvksa dk çfr'kr forj.k 160 rkfydk 4-23 lhch,lbZ cksMZ yM+fd;ksa vkSj yM+dksa ds chp miyfCèk çsj.kk vkSj vè;;u dh vknr ds chp lacaèk 162 rkfydk 4-24 ekè;fed Lrj ij tsbZch cksMZ ds Nk=ksa ds fy, fHkUurk rkfydk dk fo'ys"k.k 164 rkfydk 4-25 ekè;fed Lrj ij lhch,lbZ cksMZ ds Nk=ksa ds fy, fHkUurk rkfydk dk fo'ys"k.k 165
rkfydk 4-26 mÙkjnkrkvksa dk çfr'kr forj.k 'kS{kf.kd ruko ds vuqlkj] tsbZch cksMZ vkSj lhch,lbZ cksMZ ds lHkh 400 Nk=ksa esa miyfCèk çsj.kk 167 rkfydk 4-27 lHkh mPp ekè;fed yM+fd;ksa vkSj yM+dksa esa 'kS{kf.kd ruko vkSj miyfCèk çsj.kk ds chp lacaèk 169 rkfydk 4-28 mÙkjnkrkvksa dk çfr'kr forj.k tsbZch cksMZ vkSj lhch,lbZ cksMZ ds lHkh 400 Nk=ksa esa 'kS{kf.kd ruko vkSj vè;;u dh vknr ds vuqlkj 170 rkfydk 4-29 lHkh mPp ekè;fed yM+fd;ksa vkSj yM+dksa esa 'kS{kf.kd ruko vkSj vè;;u dh vknr ds chp lacaèk 171 rkfydk 4-30 tsbZch cksMZ vkSj lhch,lbZ cksMZ ds lHkh 400 Nk=ksa esa miyfCèk çsj.kk vkSj vè;;u dh vknr ds vuqlkj mÙkjnkrkvksa dk çfr'kr forj.k 172 rkfydk 4-31 lHkh ekè;fed Lrj dh yM+fd;ksa vkSj yM+dksa esa miyfCèk çsj.kk vkSj vè;;u dh vknr ds chp lacaèk 174
1 v/;k;&1 ifjp; Nk= fdlh Hkh ns'k dk Hkfo"; gksrs gSa] tgk¡ lekt mUgsa f'k{kk çnku djds mudh t:jrksa ds vuqlkj rS;kj djrk gS] blfy, ,d Nk= dks vius thou esa vyjkmaMj cukus ds fy, f'k{kk lcls egRoiw.kZ midj.k gSA ysfdu vkt Kku vkSj dkS'ky ds ekeys esa f'k{kk dk vFkZ iwjh rjg ls leku :i ls cny x;k gSA f'k{kk vke yksxksa dh utj esa vk; dk ,d lzksr cu xbZ gS] tgk¡ çR;sd Nk= ds lkFk&lkFk muds ekrk&firk Hkh pkgrs gSa fd mudk cPpk vU; lHkh {kerkvksa dks vyx j[krs gq, 'kS{kf.kd çn'kZu esa loZJs"B gksA vktdy ns'k esa Nk=ksa ds chp çfrLièkkZ dk c>+k gqvk Lrj ,d tkuk&igpkuk ekeyk gSA vfèkdrj Nk= Lo;a ls cgqr vfèkd vis{kk,¡ j[krs gSa vkSj viuh {kerkvksa dks vyx j[krs gq, lHkh çdkj ds vdknfed çn'kZuksa esa Lo;a dh rqyuk iwjh rjg ls csgrj djrs gSa vkSj mUgsa Hkh loZJs"B cukuk pkgrs gSaA ysfdu tc mUgsa eupkgk ifj.kke ugha fey ikrk gS rks muesa ekufld ;k 'kkjhfjd ruko tksj idM+us yxrk gSA Tkhou ds fdlh u fdlh fcanq ij lHkh dks çHkkfor djrh gS] vkSj gekjh thou'kSyh ls Hkh çHkkfor gks ldrh gSA Nk=ksa dks dbZ rjg ds rukoksa dk lkeuk djuk iM+ jgk gS tSls ijh{kk dh fpark] le; ij vlkbuesaV tek djuk] ijh{kk esa çn'kZu] mckÅ d{kk,¡a] vR;fèkd x`gdk;Z] d{kk esa xyr mÙkj] [kjkc mifLFkfr] 'kksj d{kk] d{kk esa nsj ls vkuk] [kkyh le; dh deh] xyrh djus dk Mj vkSj vPNs f'k{kdksa dh dehA ruko lhèks rkSj ij Nk= dh miyfCèk dks çHkkfor djrk gS vkSj muds lkekU; LoLFk nSfud thou esa vlarqyu iSnk djrk gSA bl çdkj] dHkh&dHkh mUgsa vkRegR;k] ?kj ls vigj.k] d{kk esa vuq'kklughurk iSnk djuk] fu;fer d{kk,¡¡ u feyuk] vijkèkh O;ogkj] vlkekU; O;ogkj] nqO;Zogkj] cqjs lkfFk;ksa ds lewg esa 'kkfey gksuk vkfn tSls vçk"frd dk;ksZa ds fy, usr`Ro djukA vkt fd'kksjksa ds lkeus lcls vke leL;k,¡ gSa % vkRelEeku vkSj 'kjhj dh Nfo] volkn] ruko] cnek'kh] 'kjkc ihuk vkSj èkweziku] cky 'kks"k.k] çfrLièkkZ vkSj lkfFk;ksa dk nckoA

2 gSjkuh dh ckr ;g gS fd ;s lHkh leL;k,¡ pSV fj,D'ku dh rjg ,d&nwljs ls tqM+h gqbZ gSaA tc fd'kksj vkRe&lEeku 'kjhj dh Nfo dh leL;kvksa dk lkeuk djrs gSa] rks os fujk'k gks ldrs gSa] ftlds ifj.kkeLo:i fodkj vk ldrs gSaA fd'kksj tc Hkh lkfFk;ksa ds ncko ;k Ldwy esa fdlh çfr;ksfxrk] ;k ?kj ij cky 'kks"k.k ds laidZ esa vkrs gSa] rks os ruko eglwl djus yxrs gSaA dbZ fd'kksj vius ruko ls jkgr ikus ds fy, 'kjkc ihus vkSj èkweziku djus yxrs gSa] dbZ ?kj ls Hkkx ldrs gSa] dal;wVj xse [ksy ldrs gSa vkSj vtufc;ksa ds lkFk vuykbu pSV djuk 'kq: dj ldrs gSaA dal;wVj xse vkSj vKkr ds lkFk&lkFk Kkr yksxksa ds lkFk vuykbu pSfVax ds ifj.kkeLo:i yr yx ldrh gSA ftu yksxksa dks ?kj ij I;kj ;k Ldwyksa esa leFkZu ugha feyrk gS] os Ldwy ;k LFkkuh; {ks=ksa esa nksLrksa ds lkFk lacaèk cukuk 'kq: dj nsrs gSa] ftlds ifj.kkeLo:i vkØked O;ogkj ds lkFk&lkFk çkFkfedrk okys eqíksa esa o`f) gksrh gSA dbZ fd'kksj ,d ckj vijkèkksa dk lgkjk ysrs gSa tc mUgsa yxrk gS fd mUgsa vius ifjokj ds lkFk&lkFk Ldwy ls Hkh dksbZ enn ;k lgk;rk ugha fey ldrh gSA cPpksa esa yxkrkj ruko mudh xfrfofèk;ksa] LokLF; vkSj fodkl ds fy, gkfudkjd gSA ruko udkjkRed vkSj ldkjkRed nksuksa fLFkfr;ksa ds dkj.k gks ldrk gSA Qsfeuk ¼^ruko ls çsfjr gdykuk^½ rd ¼^tgk¡ eu fcuk Mj ds gS^½ ls] Ldwyh Nk=ksa ds chp 'kS{kf.kd ruko ,d çeq[k lekpkj gS tks lqf[kZ;k¡ cVksj jgk gSA Ldwy ds ruko dk vuqHko cgqr n%q[k dk dkj.k curk gS vkSj euksoSKkfud vkSj O;ogkfjd eqíksa dh ,d foLr`r J`a[kyk dk çkFkfed dkj.k gSA blus " Hkkjrh; lekt vkSj laL"fr ij vkSifuosf'kd fu;a=.k ds ncko" ij viuh Nki NksM+h gS] tSlk fd Hkkjr esa oÙkZeku f'k{kk'kkL= vkSj ikBîØe çnf'kZr djrk gS ¼dqekj] 1991½A urhtru] dqekj ¼1991½ dk rdZ gS fd f'k{kk esa vkSifuosf'kd ç.kkyh ds foLrkj vkSj vdsys ijh{kkvksa ij tksj nsus ds ifj.kkeLo:i ^Ldwyh ikBîØe Hkkjrh; cPps ds jkstejkZ ds vuqHko vkSj ifjos'k ls iwjh rjg ls vyx gks x;k^A Hkkjr esa f'k{kk fczfV'k fu;a=.k ds le; ls ukVdh; :i ls cny xbZ gS] u dsoy Nk=ksa ds fy, cfYd çksQsljksa ds fy, Hkh ikBîiqLrdksa ij vfèkd è;ku dsafær fd;k tk jgk gS] vkSj O;kogkfjd :i ls fo|kfFkZ;ksa dks;kn j[kus dh vko';drk gS rkfd os ijh{kkvksa esa mUgsa fQj ls cuk ldsaA

3 ikBîiqLrd ds çR;sd i`"B ds vè;;u dks cM+h ijh{kkvksa dh rS;kjh vkSj ;g lqfuf'pr djus dh rduhd ds :i esa ns[kk x;k fd Hkfo"; esa Nk=ksa dk lqjf{kr Hkfo"; gksxkA ruko dks ikjaifjd :i ls fd'kksj fodkl vkSj Ldwy ds vuqHko ds ,d egRoiw.kZ ?kVd ds :i esa ns[kk x;k gSA fo'ks"k :i ls] vPNk ruko ¼ ;wLV³sl ½ cPpksa dks ubZ leL;kvksa ij dkcw ikus vkSj udkjkRed vuqHkoksa ls okil ykSVus ds fy, vkRefo"okl gkfly djus esa enn djus ds fy, fn[kk;k x;k gSA nwljh vksj] bl mez ds vfèkdka'k cPps iwjh rjg ls rckgh dh fLFkfr esa fn[kkbZ nsrs gSaA gj pht esa] fo'ks"k :i ls çfr;ksxh ijh{kkvksa esa iw.kZrk çklr djus dk c>+rk ncko] vè;;u esa yxus okys le; vkSj Hkkjrh; Ldwyh cPpksa ds chp euksoSKkfud fodkjksa ds chp dh dM+h ds ckjs esa fpark iSnk dj jgk gSA f'k{kkfonksa esa vPNk çn'kZu djus ds fy, Nk=ksa ij ncko c>+ jgk gS] ftlds ifj.kkeLo:i Nk=ksa esa ruko dh egkekjh QSy xbZ gS] ftlds udkjkRed çHkko gSa tSls uhan dh deh vkSj csbZekuh] volkn vkSj fpark]'kjkc vkSj u'khyh nokvksa tSlh fouk'kdkjh phtksa dk mi;ksxA

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vè;;uksa ds ifj.kkeksa ls irk pyk gS fd

ftu fo|kfFkZ;ksa esa Ldwy esa dke dk cks< vfèkd gksrk gS] os vfèkd Fkds gq, gksrs gSa vkSj viuh i>+kbZ ls nwj gks tkrs gSa ¼duj ,V vy 2010½A nqfu;k Hkj esa] ekè;fed fo|ky; esa cPpksa ds fy, vdknfed ncko ruko dk ,d vPNh rjg ls çysf[kr lzksr gS ¼ MksM~l ,aM fyu] 1993(fØLVh ,aM eSdeqfyu] 1998(czkmu ,V vy 2006½A gky ds o"kksZa esa] ehfM;k esa fu;fer :i ls ;qokvksa dh vkRegR;k dh [kcjsa lkeus vkbZ gSa] vkSj buesa ls vfèkdka'k ekeyksa dks vdknfed ncko ;k ijh{kkvksa esa foQyrk ls tksM+k x;k gSA ruko vkèkqfud le; esa yksxksa ds fy, dkQh fof'k"V vuqHko cu x;k gS] vkSj bls vDlj 'kkjhfjd vkSj euksoSKkfud y{k.kksa ds :i esa fn[kk;k tkrk gSA ruko dh ikjaifjd ifjHkk"kk,¡ ruko dh fLFkfr ds fy, 'kkjhfjd çfrfØ;k ij vkèkkfjr gksrh gSaA gal 'khys ds vuqlkj ruko] fdlh Hkh vko';drk ds fy, 'kjhj dh vçR;kf'kr çfrfØ;k ds :i esa of.kZr gSA D;ksafd gal f'kys dh voèkkj.kk nSfgd gS] ;g gkekZsu ds dk;ksZa ij tksj nsrh gS] tks raf=dk ra= dh fØ;kvksa ds ctk; vfèko`Dd vkSj vU; xzafFk;ksa }kjk çnku dh tkrh gSaA f'kys us nks çdkj ds rukoksa dks fu:fir fd;k %

4 ¼v½ ;wLV³sl] tks fd gYds vkSj okaNuh; ruko tSls çfrLièkÊ [ksyksa esa Hkkx ysus ds nkSjku vuqHko fd, x, ruko dks lanfHkZr djrk gS(¼c½ fMLV³sl] tks çfrLièkÊ [ksyksa esa Hkkx ugha ysus ij vuqHko fd, x, ruko dks lanfHkZr djrk gSA tks Hk;kud] vR;fèkd] vuqfpr ;k vokafNr ruko gS] mls ^ladV^ dgk tkrk gSA yktj vkSj Qkspesy ds vuqlkj] ruko t:jrksa vkSj lalkèkuksa ds xyr lajs[k.k ds lkFk&lkFk mu nckoksa ls Hkh gks ldrk gS tks fdlh dh lgu djus dh {kerk ls vfèkd gksrs gSaA ruko çcaèku vkSj fodkl esa] ;g èkkj.kk fd ruko rukodrkZ dh lhèkh çfrfØ;k ugha gS] cfYd ,d lalkèku gS] vuqdwyu djus vkSj i{kksa dks cnyus dh {kerk] vkSj eè;LFkrk ds ekè;e ls ruko dks fu;af=r djus dh {kerk lHkh dks è;ku esa j[kk tkrk gSA ruko HkkoukRed ;k 'kkjhfjd ruko dh Hkkouk gSA ;g fdlh Hkh ?kVuk ;k fopkj ls vk ldrk gS] tks vkidks fujk'k] Øksfèkr ;k uoZl eglwl djkrk gSA ruko ,d pqukSrh ;k ek¡x ds fy, vkids 'kjhj dh çfrfØ;k gSA 'kVZ VeZ esa] ruko ldkjkRed gks ldrk gS] tSls fd tc ;g vkidks [krjs ls cpus ;k le; lhek dks iwjk djus esa enn djrk gSA ysfdu tc ruko yacs le; rd cuk jgs rks ;g vkidh lsgr dks uqdlku igq¡pk ldrk gSA ruko f'kdkfj;ksa vkSj [krjksa ds f[kykQ 'kjhj dh çk"frd j{kk gSA ;g 'kjhj dks gkekZsu ls Hkj nsrk gS tks [krjs ls cpus ;k lkeuk djus ds fy, vius flLVe dks rS;kj djrk gSA yksx vkerkSj ij bls yM+kbZ&;k&mM+ku ra= ds :i esa lanfHkZr djrs gSaA tc euq"; fdlh pqukSrh ;k [krjs dk lkeuk djrs gSa] rks muds ikl vkaf'kd :i ls 'kkjhfjd çfrfØ;k gksrh gSA 'kjhj mu lalkèkuksa dks lfØ; djrk gS tks yksxksa dks ;k rks jgus vkSj pqukSrh dk lkeuk djus ;k ftruh tYnh gks lds lqj{kk çklr djus esa enn djrs gSaA 1-1 ruko D;k gS\ ruko vkèkqfud thou 'kSyh dk ,d vifjgk;Z ifj.kke gSA f'k{kk dk ncko] egkuxjh; {ks=ksa esa O;Lr thou dk;ZØe] tula[;k esa rsth ls o`f) vkSj thou esa fofHkUu fnu&çfrfnu dh

5 leL;k,¡ dqN ,sls dkj.k gSa tks ruko dk dkj.k curs gSaA ruko raf=dk ruko dh ,d fLFkfr gS ftldk fdlh O;fä dh Hkkoukvksa] O;ogkj] fopkj çfØ;k vkSj 'kkjhfjd vkSj ekufld LokLF; ij lhèkk çHkko iM+rk gSA gekjs okrkoj.k esa ruko l{ke xfrfofèk tks fn[kkbZ ns jgh gSA NksVs cPps] iq#"k vkSj efgyk,a] ukSdjhis'kk@csjkstxkj vkSj vU; lHkh yksx vius thou esa ruko dk lkeuk dj jgs gSaA vkt thou ckèkkvksa ls Hkjk gSA nSfud thou esa ge cgqr lh ifjfLFkfr;ksa dk lkeuk djrs gSa] ftuesa ls dqN gekjs fy, çsj.kknk;h ?kVuk ds :i esa dk;Z djrh gSa vkSj dqN fofHkUu pqukSfr;ksa dk dkj.k curh gSaA pqukSfr;ksa dk vfèkd etcwrh ls lkeuk djus dh ;g ekuoh; ço`fÙk gS] ysfdu leL;k,¡ gj O;fä esa vyx&vyx gksrh gSaA os leL;k,¡] tks ckj&ckj nksgjkbZ tk ldus okyh ç"fr dh gksrh gSa tks ruko dh vksj ys tkrh gSa ¼O;fä ij fuHkZj djrh gS½A ruko thou dk ,d vfoHkkT; fgLlk gSA oÙkZeku ifj„'; esa gj lekt esa ,d tSlh pqukSfr;k¡ gSa vkSj lHkh dks thou esa bu pqukSfr;ksa ds ekè;e ls fdlh u fdlh rjg ds ruko dk lkeuk djuk iM+rk gSA ge ruko dks fdlh O;fä ds ckgjh ;k vkarfjd okrkoj.k esa ekStwn fdlh Hkh dkjd ds :i esa ifjHkkf"kr dj ldrs gSa tks mlds larqyu dks fcxkM+rk gSA O;kid :i ls ;g dgk tk ldrk gS fd okrkoj.k esa dqN Hkh tks fdlh ds 'kkjhfjd vkSj ekufld LokLF; ds larqyu ;k lkeatL; dks fcxkM+rk gS] ruko iSnk dj ldrk gSA ;gk¡ rd fd lq[kn mÙkstuk ;k fLFkfr Hkh fdlh O;fä ds fy, rukoiw.kZ gks ldrh gS D;ksafd ;g mlds larqyu dks Hkh fcxkM+ nsrh gSA njvly] ml mÙkstuk dh èkkj.kk gh mls rukoiw.kZ cukrh gSA ;fn dksbZ mÙkstuk ;k fLFkfr dks rukoiw.kZ ;k cksf<y ekurk gS rks og ruko eglwl djsxk] blhfy,] ,d gh mÙkstuk ;k fLFkfr ,d O;fä ds fy, rukoiw.kZ gks ldrh gS] ysfdu nwljs ds fy, ughaA oÙkZeku thou dh ifjfLFkfr;ksa esa ruko ;k rukoiw.kZ fLFkfr cgqr vke gks xbZ gSA vktdy dk thou gj {ks= esa bruk rst vkSj dfBu gks x;k gS fd gj fdlh dks jkstkuk u tkus fdrus rukoksa dk lkeuk djuk iM+rk gSA u dsoy o;Ld cfYd cPps Hkh oÙkZeku thou fLFkfr;ksa esa cgqr vfèkd ruko dk lkeuk dj jgs gSaA tSls&tSls nqfu;k cgqr çfrLièkkZRed gks xbZ gS] vkSj gj dksbZ rsth ls fodkl'khy lekt dk lkeuk djus ds fy, rsth ls nkSM+ jgk gS] oSls gh cPpksa dks Hkh vkt dh nqfu;k

6 dh xfr ds lkFk pyus ds fy, cgqr ruko dk lkeuk djuk iM+rk gSA ekrk&firk dh dyg vkSj vLoh"fr tSlh ikfjokfjd fLFkfr;ksa ds vykok] vkt ,d cPps ds thou esa çeq[k ruko mlds 'kS{kf.kd çn'kZu vkSj dfj;j ls lacafèkr gSaA vxj ge vrhr esa ns[ksa rks 30 ls 50 lky igys Hkh cPps cgqr ykijokg gqvk djrs Fks] os Ldwy tkrs Fks vkSj i>+rs Fks] ysfdu i>+kbZ muds fy, dksbZ cks< ;k ncko ugha FkkA ;gk¡ rd fd ekrk&firk Hkh vius cPpksa dh f'k{kk vkSj vdknfed çn'kZu ds ckjs esa T;knk fpark ugha djrs FksA ysfdu vxj ge gky ds fnuksa esa ns[ksa] [kkldj fiNys 15 ls 20 o"kksZa esa] vdknfed ncko bruk c>+ x;k gS fd cPps vc viuh i>+kbZ ds dkj.k ruko eglwl djus yxs gSaA lHkh ds fy, f'k{kk ds foLrkj vkSj foLrkj ds lkFk çfrLièkÊ nqfu;k dh ek¡xsa fnu&c&fnu c>+rh tk jgh gSa(çfr;ksfxrk,¡ dkQh gn rd c>+ xbZ gSaA ulZjh d{kk esa nkf[kys ls ysdj cPpksa o vfHkHkkodksa dks ijs'kkuh dk lkeuk djuk iM+ jgk gSA vc ,d cPps dks ulZjh d{kk esa ços'k ikus ds fy, vius ekrk&firk ds lkFk ijh{kk vkSj lk{kkRdkj ds fy, mifLFkr gksuk iM+rk gS vkSj tSls&tSls f'k{kk dk Lrj c>+rk gS] çfrLièkkZ ds dkj.k ncko vkSj cks< c>+rk gSA tSls&tSls cPpk cM+k gksrk gS vkSj fo'ks"k dfj;j ds :i esa p;u djus ds ckjs esa lksprk gS] cPps dks fQj ls cgqr çfrLièkkZ vkSj nckoksa dk lkeuk djuk iM+rk gSA bu nckoksa ds dkj.k cPpksa vkSj fd'kksjksa esa leku :i ls ruko iSnk gks x;k gSA gky ds fnuksa esa] fd'kksjksa dh lek;kstu leL;kvksa esa o`f) gqbZ gS] tks euksoSKkfud tksj nsrs gSa fd [kjkc ekufld LokLF; ds dkj.k gSaA fpfdRlk fo'ks"kKksa] lkekftd oSKkfudksa vkSj f'k{kkfonksa ds chp ekufld LokLF; leL;k,¡ vkSj lacafèkr eqís fo'ks"k :i ls fd'kksjksa ls lacafèkr gSaA ekufld LokLF; ds fo'ks"k :i ls fuokjd vkSj çksRlkgd igyqvksa us mipkjkRed igyw dh rqyuk esa fo'ks"k è;ku vkdf"kZr fd;k gSA vPNs ekufld LokLF; dk vFkZ dsoy ekufld LokLF; leL;kvksa dh vuqifLFkfr ugha gS] cfYd bldk vFkZ cgqr vfèkd gS] fo'ks"k :i ls HkkoukRedrk] jpukRedrk] cqf) vkSj vkè;kfRedrk ds fodkl] igy] fodkl vkSj lkekftd lacaèkksa ds j[kj[kko] leL;kvksa dk lkeuk djus vkSj lcd ysus dh {kerk ds lanHkZ esaA Hkfo"; ds fy,] vkRe&iqf"V vkSj lgkuqHkwfrA dqN dkjd ekStwn gksus ij] dsoy udkjkRed ekufld LokLF; esa ;ksxnku djrs gSaA ;s udkjkRed dkjd ekufld fodkj ;k ekufld y{k.k ¼fpark] volkn] tquwu ½ ;k ;gk¡ rd

7 fd udkjkRed fLFkfr ¼Øksèk] 'k=qrk] vlarks"k] bZ";kZ] fpM+fpM+kiu] Hk;] iwokZxzg] ghu Hkkouk] vdsykiu] ?k`.kk fpark vkSj volkn½ ds :i esa çdV gksrs gSaA ldkjkRed ekufld LokLF; dY;k.k] vkRefo"okl] {kerk] miyfCèk] vgadkj 'kfä] lqj{kk vkSj lek;kstu dh lkekU; Hkkouk ds :i esa çdV gks ldrk gSA vkt dk fd'kksj lek;kstu dh vusd leL;kvksa ls tw< jgk gSA fpark] vlqj{kk dh Hkkouk] vkRefo"okl dk fuEu Lrj vkSj i;kZoj.k ds lkFk rkyesy fcBkus esa vleFkZrk us ubZ ih>+h dks =Lr dj fn;k gSA fiNys vè;;uksa ls ladsr feyrk gS fd Nk=ksa dh ekufld HkykbZ nk¡o ij gSA vfèkdka'k vè;;u O;ogkj fodkjksa dh mPp çlkj nj dh fjksVZ djrs gSaA 6&10 izfr"kr ds chp dk vuqeku gS fd Ldwyh mez ds yxHkx 10 izfr"kr cPps HkkoukRed :i ls fodykax gSaA vkby vQ okbV ds O;kid vè;;u us ladsr fn;k fd Ldwyh mez ds 6&8 izfr"kr cPps HkkoukRed :i ls fodykax gSaA ftl rjg ds 'kS{kf.kd vkSj fofHkUu rukoksa dk os lkeuk djrs gSa] os fpark vkSj fofHkUu vU; ruko çsfjr fodkjksa ds fy, çfo.k gks tkrs gSaA xaHkhj HkkoukRed v'kkafr okys cPpksa ds ckjs esa vkSj ns[kHkky lsokvksa vkSj mipkjksa ds ckjs esa Kku dk vkèkkj c>+ jgk gS] gkyk¡fd dbZ egRoiw.kZ ç'u cus gq, gSaA mnkgj.k ds fy,] ekud uSnkfud Jsf.k;ksa dh LFkkiuk ds ckn ls cPps vkSj fd'kksj ekufld LokLF; fodkjksa dh le< esa dkQh lqèkkj gqvk gSA fQj Hkh] Mk;Xukstscy çn'kZu okys cPpksa esa fnu&çfrfnu ds dkedkt esa egRoiw.kZ gkfu ds ckjs esa Li"V :i ls irk ugha py ik;k gSA xaHkhj HkkoukRed fodkjksa okys cPpksa dh lgh igpku djus ds fy, bl fHkUurk dh Li"V le< egRoiw.kZ gSA 'kk;n blls Hkh vfèkd egRoiw.kZ uhfr] lsok vkSj mipkj ds fufgrkFkZ gSa tks cPps vkSj fd'kksjksa ij xaHkhj HkkoukRed fodkjksa ds çHkko dh le< ls çsfjr gksrs gSaA ruko ;qok vkSj o;Ldksa esa Hkh dbZ leL;kvksa dk ewy dkj.k jgk gSA ekè;fed Lrj ds Nk= ruko dk dsaæ fcanq jgs gSa D;ksafd ;g Nk= ds thou dk og pj.k gS tgk¡ muds thou dk ,d u;k vè;k; [kqyrk gSA ;g og pj.k gS tgk¡ ijh{kk esa vPNs xzsM ds ckjs esa Nk= ij Hkkjh ncko gksrk gS] fdlh fo'ks"k LVªhe dks pquuk] ml LVªhe esa viuk dfj;j iFk r; djuk vkSj brus lkjs ç'u tks vklkuh ls muds jkLrs dks dfBu cukrs gSaA Nk= ij ;g ,d ,slk ncko gS tks fd fdlh Hkh rjg ls mlds 'kSf{kd çn'kZu dks èoLr dj nsrk gS D;ksafd gj fdlh ls csgrj çn'kZu djus dk ncko] ijh{kk esa vPNs xzsM gkfly

8 djus ds fy, ;s ekufld ncko Nk=ksa dks ijs'kku djrk gS vkSj mudk xzkQ dHkh&dHkh rsth ls fxjrk gS vkSj blds fy, Hkh mUgsa nks"kh Bgjk;k tkrk gS fd mUgksusa mudh {kerk ds vuqlkj ç;kl ugha djkA 1-1-1 ruko ds dkj.k fofdihfM;k ¼2013½ fuEufyf[kr çdkj ds rukoksa dks lwphc) djrk gS% 1- ;wLVªsl % ldkjkRed ruko ftlls nh?kZdkfyd dkedkt esa lqèkkj gks ldrk gS ldkjkRed vkSj ruko lekukarj ugha pysxkA ysfdu] ;s f[kykM+h ds dbZ mnkgj.k gSa] tks ruko ds Lrj ij èkdsyrs gSa vkSj vlaHko miyfCèk;ksa dks çkIr djrs gSaA dqN euksoSKkfudksa dk er gS fd dqN rukoiw.kZ ifjfLFkfr;k¡ okLro esa gekjh vkarfjd 'kfä dks c>+k,¡xh vkSj jpukRedrk esa vfèkd lgk;d gksaxhA lqèkk paæu] Hkkjr dh ,d urZdh] ,d nq?kZVuk esa vius nksuksa iSj [kks nsrh gSA ysfdu] bu 'kkjhfjd vkSj lkekftd v{kerkvksa us mUgsa vius dfj;j dks vkxs c>+kus vkSj "f=e iSjksa dh enn ls vfèkd ls vfèkd vPNs çn'kZu nsus] muds [ksy vkSj thfor vkRekvksa dks lyke djus ds fy, vkSj vfèkd xfr çnku dhA fo'ks"kK gesa le<krs gSa fd ruko gekjs thou esa cgqr mi;ksxh ?kVuk gSA ruko gekjs 'kjhj ds ekè;e ls fofHkUu çfrfØ;kvksa dk ifj.kke gS] vkSj og çfrfØ;k,¡ gesa thou esa ckgjh vkSj vkarfjd [krjukd fLFkfr esa enn djsaxhA dqN 'kksèk crkrs gSa fd ruko okLro esa gekjh dk;Z'kSyh@çn'kZu dks c>+kok nsxkA ruko esa vuqÙkjnk;h gksus ds ctk;] dqN yksx bls lQyrk çkIr djus ds fy, pkyd ds :i esa mi;ksx dj ldrs gSaA ruko O;fä dh ewy {kerk dk irk yxkus vkSj [kkstus ds fy, fdlh dh fuf"Ø; çfrfØ;kvksa dks çsfjr dj ldrk gSA vR;fèkd rukoxzLr O;fä lcls [kjkc ls lokZsÙke fLFkfr esa euksoSKkfud vkSj HkkoukRed :i ls etcwr gksrk gS vkSj viuk loZJs"B çn'kZu nsrk gSA dHkh&dHkh gekjh lkspus dh çfØ;k dks rst djus ds fy, ruko t:jh gksrk gSA ;fn O;fä ruko ds çfr ldkjkRed „ f"Vdks.k j[krk gS] rks ruko gesa fdlh O;fä ds fnekx dk ,d vPNk >k¡pk fodflr djus esa enn dj ldrk gSA ruko thou esa gj vuqHko ls fuiVus ds fy, vkidh ewy {kerkvksa dks ;kn fnyk,xk vkSj blls vkids thou esa [kq'kh vk,xhA 2- fMLVªsl % ;g 'kCn vPNs ;k ldkjkRed ruko ¼;wLVªsl½ ds foijhr gS ftls cqjk ;k udkjkRed ruko dgk tkrk gSA ;g ,d ruko fodkj gS tks eq[; :i ls çfrdwy 9 ifjfLFkfr;ksa ds dkj.k gksrk gS vkSj ftlesa lkeuk djus dh 'kfä de gks jgh gSA dqN ?kVuk,¡ tks ladV dh vksj ys tk jgh gSa] os bl çdkj gSa % ¼d½ ,d djhch dh grkgrA ¼k½ foÙkh; igyqvksa esa detksjA ¼x½ Hkkjh dk;ZHkkj ;k vfèkHkkjA ¼?k½ rukoiw.kZ lacaèkA ¼M½ yxkrkj chekfj;k¡A fMLVªsl dks vkxs nks rukoksa esa oxÊ"r fd;k x;k gS(rhoz ruko vkSj iqjkuk rukoA rhoz ruko ç"fr esa dkQh vYidkfyd gksrk gS tgk¡ ç"fr esa iqjkuk ruko foLrkfjr gksrk gSA ¼d½ rhoz fMLVªsl % rhoz ladV ;k rhoz 'kq#vkr] y?kq] rhoz cqjk rukoA tc ge vlkekU; dh vksj c>+rs gq, vius ruko dks LrCèk ;k [krjs esa eglwl djrs gSa vkSj flLVe vafre fx;j esa vk tkrk gS] rks bl çdkj dk ruko ewy :i ls ,d lM+d nq?kZVuk] Mj vkfn tSlh fLFkfr ls vkrk gSA ¼[k½ fpjdkfyd ruko % ;g yxkrkj ruko gS tks chekjh vkSj ekufld fodkj dk dkj.k cu ldrk gSA Øksfud fMLVªsl dks ckj&ckj gksus okys cqjs ruko ;k yacs le; rd pyus okys ruko ds :i esa Hkh tkuk tkrk gSA ;g yksxksa ds thou esa lcls [kjkc çdkj dk ruko gSA th.kZ ladV T;knkrj yksxksa ds lkFk gksrk gSA bl çdkj ds ruko esa] gekjk 'kjhj rRdky çfrfØ;kvksa ds lkFk yxkrkj O;Lr jgrk gS] ,d gkekZsu tSls dksfVZlksy vkSj ,MªsukykbZu tSls gkekZsuA ;fn var%lzkoh ra= dks ,d gn rd vfèkd mi;ksx fd;k tkrk gS tks VwVus dk xBu djrk gSA vkidks iSfud vVSd] fpark] volkn] Øksfud Fkdku flaMªkse] Qkbczksek;fYt;k vkSj vU; chekfj;k¡ rHkh gks ldrh gSa] tc ;g ruko yacs le; rd cuk jgsA fiNys dqN o"kksZa esa thou ds lHkh pj.kksa esa ruko esa o`f) gqbZ gS] ewy :i ls dk;Z {ks= esaA ;g vk'p;Z dh ckr ugha gS fd ge lHkh dk;ZLFky ruko eglwl dj jgs gSa] ;g ;qok ih>+h ds lkFk
10 'kkjhfjd ;k ekufld LokLF; leL;kvksa dk çeq[k dkj.k gSA 'kksèk O;fä ds O;olk; vkSj muds LokLF; ds chp mfpr lacaèk fn[kkrs gSaA vLVªsfy;k ds foDVksfj;u gsYFk çeks'ku QkmaMs'ku ¼ohvkbZlh gsYFk½ us 2006 esa ,d fjiksVZ çLrqr dh ftlesa M- jc ewMh ¼lhbZvks½ us dgk fd ;qok ih>+h dh ekufld chekjh] ân; jksx] vU; 'kkjhfjd vkSj ekufld leL;kvksa vkSj fofHkUu esa dke ds ruko dk çeq[k ;ksxnku gSA vU; çfrdwy LokLF; leL;k,¡aA 3- gkbij&LVªsl % ;g ,d ,slk ruko gS ftlesa] ,d O;fä dks bl gn rd etcwj fd;k tkrk gS fd og fdruk laHkky ldrk gS] ncko ihfM+r O;fä dks tks vuqHko gksxk] mls gkbij&LVªsl ds :i esa tkuk tkrk gSA vfr&ruko vfrHkkfjr ;k vfèkd dke djus ls vkrk gSA tc dksbZ O;fä gkbij LVªsl esa gksrk gS rks ,d NksVh lh ckr mlds beks'ku dks pqVdh esa ys ysrh gSA os O;fä tks gkbij&LVªsl ls vfèkd ihfM+r gSa] os bl çdkj gSa% ? dqN efgyk,¡@iq#"k O;fäxr vkSj is'ksoj thou ds chp Q¡l x,A ? T;knkrj LFkkuh; O;kikjh ges'kk vius [kjhnkjksa dh lcls tfVy ek¡x ls iVrs gSaA ? T;knkrj yksxksa ij bl ckr dk ncko gksrk gS fd os cpr djsa ;k nSfud t:jrksa ij [kpZ djsaA ? vktdy T;knkrj yksx mRikndrk ds cM+s ncko esa dke dj jgs gSaA 4- gkbiks&LVªsl % gkbiks&LVªsl gkbij&LVªsl ds Bhd foijhr gSA gkbiks&LVªsl ,d ,sls O;fä }kjk eglwl fd;k tkrk gS tks yxkrkj Åc tkrk gSA ftUgsa viuh ukSdjh] [ksy] thou vkfn ls dksbZ pqukSrh ugha gS tSls % & ,d dkj[kkuk lg;ksxh ckj&ckj fu;fer dk;Z dj jgk gSA gkbiks&LVªsl dk ifj.kke cspsuh vkSj çsj.kk dh deh dh ,d Hkkouk gSA 1-2 Hkkjr esa 'kSf{kd ç.kkyh Ldwyh thou fdlh O;fä ds thou dk lcls jksekapd vkSj ;knxkj le; gksrk gSA ;g Ldwy esa gS fd Nk= nksLrksa dh laxfr esa thou ds lcls vPNs pj.k dk vkuan ysrk gS vkSj fofHkUu ikBîp;kZ vkSj lg&ikB~;Øe xfrfofèk;ksa dk çn'kZu djrk gS] tks mlds vuqHkoksa dks le`) djrk gS] vkSj mls ,d o;Ld ds :i esa thou dk lkeuk djus ds fy, rS;kj djrk

11 gSA o;Ldrk esa vius laØe.k dks le`) djus vkSj f'k{kk ds vxys ikBîØe dks 'kq: djus ds fy, rS;kj djus ds fy, Nk= ds lkeus dbZ pqukSfr;k¡ j[kh tkrh gSaA ;g thou ds bl pj.k esa gS fd çR;sd Nk= thou dh vkus okyh pqukSfr;ksa dk lkeuk djus ds fy, 'kkjhfjd] ekufld vkSj HkkoukRed :i ls rS;kj gksrk gSA oS"ohdj.k vkSj rduhdh çxfr ds dkj.k lkekftd&lkaL"frd okrkoj.k esa ifjorZu us Nk=ksa ij ncko c>+k fn;k gSA mUgksaus igys dh mez esa vkfFkZd fLFkfr dk ,glkl djuk 'kq: dj fn;k gS vkSj os gj xfrfofèk dks mlds vkfFkZd ifj.kkeksa ls tksM+us dk ç;kl djrs gSaA cnyrh t:jrksa vkSj ek¡xksa ds lkFk rkyesy j[kus ds fy, cPpksa dks mPp miyfCèk ds fy, fodflr djus ds fy, lekt rst] tfVy vkSj çfrLièkÊ cu x;k gSA fd'kksjkoLFkk fdlh O;fä dks Hkfo"; ds thou ds fy, rS;kj djus ds fy, f'k{kk çkIr djus dh vofèk gS vkSj Nk=ksa }kjk çkIr f'k{kk dh çHkko'khyrk vkSj n{krk dks Nk=ksa ds 'kS{kf.kd çn'kZu ls ekik tkrk gSA 'kS{kf.kd çn'kZu fd'kksj Nk=ksa ds fy, çkFkfed fpark dk fo"k; gS D;ksafd ;g lkekftd ekU;rk ds lkFk&lkFk O;fäxr larqf"V dk lzksr gSA ,d Nk= dk iwjk thou vkSj dfj;j bl egRoiw.kZ le; esa çkIr vadksa ls fuèkkZfjr gksrk gSA vius thou esa fofHkUu fgrèkkjdksa tSls ekrk&firk] lkfFk;ksa] cM+s ifjokj] lekt] Ldwy vkSj f'k{kdksa ls Nk=ksa ij Hkkjh mEehnsa gSaA f'k{kk ds fgrèkkjd vFkkZr~~ f'k{kd] Ldwy ç'kkld vkSj Nk=ksa ds ekrk&firk lHkh thou ds bl eksM+ ij Nk=ksa ds vdknfed çn'kZu ds ckjs esa fpafrr gSaA ijh{kk esa vlQy gksus dk Nk= ds thou] mlds dfj;j vkSj mlds ifjokj ij Hkh egRoiw.kZ çHkko iM+rk gSA vkt dh çfrLièkÊ nqfu;k esa] çn'kZu dh xq.koÙkk Nk=ksa dh çxfr dk çeq[k dkjd cu tkrh gSA Ldwy tkus ds lHkh mís';ksa ij ,d djhc ls ut+j Mkyus ls irk pyrk gS fd lcls egRoiw.kZ ' VeZ ,aM fjtYV' ;k ' vdknfed çn'kZu' gS tks f'k{kk ds vxys pj.k esa mudk laØe.k lqfuf'pr djrk gSA vdknfed çn'kZu dks bl :i esa ifjHkkf"kr fd;k tk ldrk gS fd Nk=ksa us vius vYidkfyd ;k nh?kZdkfyd 'kSf{kd y{; dks fdl gn rd gkfly fd;k gSA Ldwy ifjlj esa] ;g mu vadksa }kjk n'kkZ;k tkrk gS tks Nk= viuh çxfr dh tk¡p ds fy, vk;ksftr ijh{kkvksa esa çkIr djrs gSaA Hkkjr esa] tgk¡ xq.koÙkkiw.kZ mPp f'k{kk lhfer gS] Nk=ksa dks okafNr LVªhe esa vkSj okafNr laLFkku ls f'k{kk ds vxys pj.k esa vkxs c>+us ds fy, ekdZ'khV gh ,dek= ikliksVZ miyCèk gSA Nk= ,d jk"Vª ds Hkfo"; ds usrk gksrs gSa vkSj

12 fdlh Hkh jk"Vª ;k lH;rk dh çxfr mldh 'kSf{kd ç.kkyh ds fodkl ;k fofHkUu ikBîp;kZ vkSj lg&ikB~;Øe {ks=ksa esa Nk=ksa ds çn'kZu ij fuHkZj djrh gSA ljdkj] f'k{kk ç'kkld] Ldwy çkfèkdj.k] f'k{kd vkSj Nk=ksa ds ekrk&firk lHkh Nk=ksa dks Ldwyksa] dystksa] fo"ofo|ky;ksa vkSj fofHkUu vU; {ks=ksa esa csgrj >ax ls lek;ksftr djus vkSj ç.kkyh dh lQyrk lqfuf'pr djus ds fy, viuh iwjh {kerk ls vdknfed çn'kZu djus ds fy, bPNqd gSaA uhfr fuekZrk mUur laLFkkxr lqfoèkkvksa ds lkFk&lkFk vkèkqfudhdj.k ds ekè;e ls lHkh dks xq.koÙkkiw.kZ f'k{kk lqfuf'pr djus ds fy, fujarj ç;kljr gSaA gkyk¡fd ;g ns[kk x;k gS fd lHkh Nk=ksa }kjk mudh lgk;rk ds fy, lHkh laHko lqfoèkkvksa vkSj lokZsÙke f'k{kdksa ds ckotwn mPp çn'kZu çkIr ugha fd;k tkrk gSA "kSfZ{kd çn'kZu esa O;fäxr varj cuk jgrk gS vkSj ;g 'kksèkdrkZvksa dks Nk=ksa] muds ifjokjksa] lekt vkSj jk"Vª dh HkykbZ ds fy, leL;k dks LFkk;h :i ls gy djus ds fy, lekèkku [kkstus ds fy, bl eqís ij xgjkbZ ls ns[kus ds fy, çksRlkfgr djrk gSA Nk=ksa dk vdknfed çn'kZu dbZ euksoSKkfud] lkekftd] O;fäxr] vkfFkZd vkSj i;kZoj.kh; dkjdksa ls dkQh çHkkfor gksrk gSA ;s dkjd ,d Nk= ls nwljs esa] ,d {ks= ls nwljs {ks= esa] vkSj ,d jkT; ls nwljs jkT; esa fHkUu gksrs gSa(ysfdu os f'k{kk ds ifj.kke ;kuh vdknfed çn'kZu dks „>+rk ls çHkkfor djrs gSaA 'kS{kf.kd çn'kZu ds Lrj dh Hkfo";ok.kh djus ds fy, vU; dkjdksa dk Hkh mi;ksx fd;

50%	**MATCHING BLOCK 8/145**	SA	Anamika Tiwari Thesis.pdf (D144837136)

k x;k gS ftlesa f'k{kd dh f'k{kk dk Lrj] f'k{kd dh f'k{k.k '

kSyh] fyax varj] ifjokj dh 'kSf{kd i`"BHkwfe] Nk= dh lkekftd fLFkfr] Nk= ds ifjokj dh vkfFkZd fLFkfr 'kkfey gSA lkfFk;ksa dh xq.koÙkk vkSj lkfFk;ksa ds lkFk Nk= dh ckrphrA ;g Hkh Lohdkj fd;k tkrk gS fd 'kSf{kd ekxZn'kZu dh deh] nks"kiw.kZ vè;;u dh vknrsa] lh[kus dh viw.kZ i)fr] vuqfpr lh[kus dh lqfoèkk] cksyh tkus okyh Hkk"kk dk vi;kZIr Kku vkSj Nk= ds lapkj dkS'ky Hkh vdknfed çn'kZu esa fxjkoV dk dkj.k curs gSaA fiNys dqN n'kdksa esa vdknfed çn'kZu dks çHkkfor djus okys dkjdksa dk irk yxkus ds fy, ,d c>+k gqvk 'kksèk ns[kk x;k gS vkSj 'kSf{kd euksfoKku ds 'kksèkdrkZvksa us Hkfo";oäkvksa ds :i esa dbZ laKkukRed] çsjd vkSj çklafxd pj 'kkfey fd, gSa ¼ tsusl] 2005½A

13 ukjax ¼2015½ ds vuqlkj] ^O;fäRo vkSj i;kZoj.k dk gj igyw f'k{kk ds lHkh Lrjksa ij 'kS{kf.kd miyfCèk dks çHkkfor dj ldrk gSA vdknfed miyfCèk ds Lrj dks fuèkkZfjr djus ds fy, dke djus okys dkjdksa dh igpku djus esa euksoSKkfudksa] f'k{kdksa vkSj lykgdkjksa dh fujarj fpark bl rF; ds ifj.kkeLo:i gqbZ gS fd 'kSf{kd lQyrk ds fy, i;kZlr cqf) okys dbZ Nk=ksa us viuh {kerk ds vuq:i fuEu Lrj ij gkfly fd;k gSSA blds ifj.kkeLo:i O;fäRo vkSj èkkj.kk pj ij u;k tksj fn;k x;k gS] tks vke rkSj ij Loh"r fo"okl ls mitk gS fd vdknfed çn'kZu Nk= ds dqy O;ogkj dk ,d vkSj igyw gS] vkSj O;fäRo vkSj èkkj.kk pj dh xfr'khy çfØ;kvksa }kjk fuèkkZfjr vkSj çHkkfor gksrk gSAß chloha 'krkCnh ds mÙkjkèkZ esa vdknfed çn'kZu dks çHkkfor djus okys ladsrdksa dh Hkfo";ok.kh djus ds fy, 'kksèkdrkZvksa ds chp ,d c>+h gqbZ #fp ns[kh xbZA dbZ 'kksèkdrkZvksa us lQyrkiwoZd dqN igyqvksa dh Hkfo";ok.kh dh gS tks eq[; :i ls vdknfed çn'kZu dks çHkkfor djrs gSa] ysfdu O;fäxr erHksn cus jgrs gSa vkSj ;g vkxs ds vè;;u dh dfe;ksa dks Hkjus ds fy, çksRlkfgr djrk gSA dbZ 'kksèk fu"d"kZ Nk=ksa ds vdknfed çn'kZu dks muds thou ds fofHkUu igyqvksa ls tksM+rs gSaA dqN igyw tks Ldwyksa esa Nk=ksa ds vdknfed çn'kZu dks vR;fèkd çHkkfor djrs gSa] os gSa cqf)eÙkk] Ldwy ds okrkoj.k esa lek;kstu] O;fäRo ds fofHkUu igyw] miyfCèk çsj.kk vkSj O;ogkj lacaèkh y{k.kA ft+ejeSu ¼2000½ ds vuqlkj] vdknfed çn'kZu lkekftd&'kkjhfjd pj vkSj dbZ vU; mYys[kuh; pj ds lkFk tqM+k gqvk gSA lkekftd&'kkjhfjd pjksa esa vkRe&voèkkj.kk] vkRe&lEeku] vkRefo"okl] vkRe&fu;eu] vkRe&çHkkodkfjrk] Ldwyh f'k{kk esa #fp] vè;;u dh vknrsa] fu;a=.k dk LFkku] 'kS{kf.kd ruko vkSj dbZ vU; 'kkfey gSaA b"Vre vdknfed çn'kZu çkIr djus ds fy, bu lHkh pjksa dks csgrj >ax ls çcafèkr fd;k tkuk gSA vat+h] ,y&vy& ¼2005½ us blh rjg ds ,d vU; vè;;u esa Nk=ksa dh fpark] vkRelEeku] vk'kkokn vkSj fujk'kkokn ds lacaèk esa 'kS{kf.kd miyfCèk ds lacaèk dh tk¡p dhA ifj.kkeksa ls irk pyk fd vdknfed miyfCèk ldkjkRed :i ls vkRelEeku vkSj vk'kkokn ls lacafèkr gS tks ;g n'kkZrk gS fd Nk=ksa esa ;s ldkjkRed xq.k ftrus vfèkd ekStwn gksaxs] mudk 'kS{kf.kd çn'kZu mruk gh csgrj gksxkA fQj ls] vdknfed miyfCèk dks fpark vkSj fujk'kkokn ls udkjkRed :i ls lacafèkr

76%	**MATCHING BLOCK 9/145**	SA	PhD thesis monoj das.docx (D144733372)

ik;k x;k tks ;g n'kkZrk gS fd Nk=ksa esa ;

s udkjkRed xq.k ftrus vfèkd ekStwn gSa] mudk 'kS{kf.kd çn'kZu mruk gh de gS vkSj blds
14 foijhrA çR;sd O;fä vius lkFk ;k vius vkl&ikl ?kVus okyh ?kVukvksa dk dkj.kkRed Li"Vhdj.k nsus dk ç;kl djrk gSA euksoSKkfud ¶+jhV~t+ ghMj ¼1958½ us thou esa lQyrk ;k vlQyrk dks le<kus ds fy, ,fVªC;w'ku dh voèkkj.kk dk bLrseky fd;kA lkekftd euksfoKku esa] ,fVªC;w'ku 'kCn dk ç;ksx ;k rks O;ogkj dh O;k[;k nsus ds fy, fd;k tkrk gS ¼vFkkZr~D;ksa ç'u dk mÙkj nsus ds fy,½ ;k fu"d"kZ fudkyus ds fy, ;k vkjksi yxkus ds fy, ¼vFkkZr~ O;ogkj ls y{k.kksa dk vuqeku yxkus ds fy, ½A vlkbuesaV dh ;g çfØ;k ,fVªC;w'ku ls xgjkbZ ls tqM+h gqbZ gS vkSj ghMj ¼1958½ us vius vè;;uksa ds ekè;e ls ;g lkfcr fd;k fd yksx lkekftd nqfu;k dks le<us dh dksf'k'k dj jgs gSa vkSj gj ?kVuk ds fy, ,d dkj.k vkSj çHkko lacaèk LFkkfir dj jgs gSa] Hkys gh dksbZ u gksA nwljs 'kCnksa esa] mUgksaus le<k;k fd dSls ,d O;fä vius vklikl gksus okyh ?kVukvksa ds dkj.k&çHkko lacaèk ij igq¡pus ds fy, vius ikl miyCèk tkudkjh dk Js; nsrk gSA fdlh Hkh ?kVuk dk fØ;k ifj.kke ¼vFkkZr~ fdlh fØ;k dk ifj.kke] Lo;a fØ;k ugha½ çHkkoh O;fäxr cy vkSj çHkkoh i;kZoj.kh; 'kfä ds la;kstu ij fuHkZj gksrk gSA ysfdu ghMj ¼1958½ us dgk fd dkjZokbZ ds ifj.kke ds vkjksi.k dk dkj.k vkarfjd gks ldrk gS ¼dqN vkarfjd fo'ks"krkvksa tSls muds O;fäRo] mís';ksa vkSj fo"oklksa ds fy, O;ogkj ds dkj.k dks fufnZ"V djus dh çfØ;k½ ;k ;g ckgjh gks ldrk gS ¼vlkbu djus dh çfØ;k½ fLFkfrtU; ;k i;kZoj.kh; dkjdksa tSls O;fä ds fu;a=.k ls ckgj dqN ckgjh ?kVukvksa ds O;ogkj dk dkj.k ½A gsbMj dk ewy çLrko ;g gS fd çR;sd O;fä O;ogkj dks dkj.k ekurk gS(dkj.k LFkku ;k rks cksèkd esa ;k i;kZoj.k esa gks ldrk gSA fdlh dk;Z dks djus ds fy, fdlh O;fä dh çsj.kk dk lhèkk lacaèk mlds y{; dks lQyrkiwoZd çkIr djus dh vis{kk ls gksrk gSA ;fn dk;Z dks lQyrkiwoZd iwjk djus dh çR;k'kk vfèkd gS] rks çsj.kk dk Lrj vfèkd gSA cukZMZ osuj ¼1992½ us ik;k fd fdlh O;fä dh viuh èkkj.kk ;k fo'ks"krk fdlh dk;Z esa mldh lQyrk ;k foQyrk dk dkj.k gS vkSj ;g fo'ks"krk ml ç;kl dh ek=k dks Hkh fuèkkZfjr djsxh tks og Hkfo"; esa ,sls vU; dk;ksZa esa lefiZr djsxkA osuj us lq<ko fn;k fd O;fä viuh ,fVªC;w'ku [kkst djrs gSa vkSj muds }kjk vuqHko fd, tkus okys O;ogkjksa ij vkdfLed xq.kksa dk laKkukRed :i ls ewY;kadu djrs gSaA tc xq.k ldkjkRed ifj.kke dh

15 vksj ys tkrs gSa] rks Hkfo"; esa lQyrk dh vfèkd çR;k'kk gksxh] bl èkkj.kk ds lkFk fd Hkfo"; esa blh rjg ds ç;kl ds lkFk ,d leku ifj.kke çkIr gksxkA tc fdlh O;fä }kjk vius xq.kksa ds dkj.k udkjkRed lQyrk çkIr dh tkrh gS] rks Hkfo"; esa lQyrk dh laHkkouk de gksxh] vkSj bl ckr dh laHkkouk de gksxh fd O;fä Hkfo"; esa blh rjg ds dk;Z dk ç;kl djsxkA bl çdkj] bu laKkukRed vkSj HkkokRed vkdyuksa dk Hkfo"; ds O;ogkj ij lhèkk çHkko iM+rk gS tc O;fä ,d leku dk;Z ;k leku ç"fr dh leL;k dk lkeuk djrk gSA dbZ 'kksèkdrkZvksa us crk;k gS fd fdlh Hkh ukSdjh esa fd, x, ç;kl vkSj dk;Z dks djus esa çsj.kk ds Lrj dks fuèkkZfjr djus esa ,fV³C;w'ku ,d egRoiw.kZ Hkwfedk fuHkkrk gSA flLuh] ,V vy ¼2000½ us vius vè;;u ls fu"d"kZ fudkyk Fkk fd ,d Nk= ds vdknfed çn'kZu dks çHkkfor djus okys nks lcls egRoiw.kZ vkarfjd çsjd dkjd mlds fu;a=.k vkSj vkRe &lEeku dk LFkku gSa A nksuksa vkRe fo"okl gS] tks ,d O;fä i;kZoj.k ds lkFk viuh ckrphr ds ekè;e ls fodflr djrk gS vkSj vius i{k esa lalkèku ds :i esa dk;Z dj ldrk gS ;k mldh èkkj.kk esa fLFkr Lo;a fufeZr ckèkk gks ldrk gSA mPp vkRelEeku okys O;fä ,slh fLFkfr esa jgrs gSa tgk¡ os ekurs gSa fd mUgsa mPp Lrj dk çn'kZu cuk, j[kuk gS vkSj viuh vuqekfur fLFkfr dks cuk, j[kus ds fy, vfèkdre ç;kl djuk gSA nwljh vksj] de vkRelEeku okys O;fä ghurk dh fLFkfr esa jgrs gSa vkSj pqukSfr;ksa dks vklkuh ls NksM+uk ilan djrs gSaA os mPp vkRelEeku okys O;fä;ksa dh rqyuk esa gkj vkSj fuEu çn'kZu dks vfèkd vklkuh ls Lohdkj djrs gSaA fu;a=.k dk LFkku O;fäRo euksfoKku dk ,d vU; igyw gS] tks QuZgSe vkSj LVhy ¼1993½ ds vuqlkj] ;g fo"okl gS fd fdlh fLFkfr ds fy, ,d fo'ks"k çfrfØ;k lq„>+hdj.k dh çkflr dks çHkkfor djsxh ;k ughaA jVj ¼1954] 1966½ Hkh] gsbMj dh rjg] dk ekuuk Fkk fd thou esa lQyrk ;k foQyrk dh Hkfo";ok.kh djus ds fy, ,fV³C;w'ku dk mi;ksx fd;k tk ldrk gSA jksVj }kjk O;fäxr fo'ks"krkvksa vkSj fLFkfrtU; fo'ks"krkvksa ds vkèkkj ij Li"Vhdj.k fn;k x;k Fkk A mUgksaus ' lks'ky yfuZax F;ksjh' ds vkèkkj ij fu;a=.k dh voèkkj.kk fodflr fd;k] tks thou ds ifj.kke dks çHkkfor djus dh viuh {kerk ds ,d O;fä ds fo"okl ls lacafèkr gSA fu;a=.k ds LFkku dks

76%	MATCHING BLOCK 10/145	SA	"सृजनात्मकता और आत्म-अवधारणा का दृटिबाधित और द ... (D141947618)

O;fä dh èkkj.kk ds :i esa of.kZr fd;k tkrk gS]

ftl gn rd muds thou esa ifj.kkeksa ij mudk fu;a=.k gksrk gS ¼ ysQdksVZ] 1981½A fuekZ.k dks vkarfjd ¼tks yksx ekurs 16 gSa fd os Lo;a ifj.kkeksa dks fu;af=r djrs gSa½ ls ckgjh ¼O;fä tks ekurs gSa fd ckgjh nqfu;k fu;a=.k ifj.kkeksa½ ls fujarjrk ij ekik tkrk gS A ;g Lohdkj djuk gksxk fd vkèkqfud le; esa] ekrk&firk] f'k{kdksa] nksLrksa] ifjokj vkSj lekt dh ijLij fojksèkh vis{kkvksa ds dkj.k Ldwyksa esa Nk= fujarj vlqj{kk dh fLFkfr esa jgrs gSaA Nk=ksa dks thou ds gj {ks= esa ç'kZu djuk gksrk gS vkSj vius thou esa fofHkUu fgrèkkjdksa dks dkQh gn rd larq"V djuk gksrk gSA çfrLièkkZ dk ;g ncko vkerkSj ij Nk=ksa dks HkkoukRed] ekufld vkSj euksoSKkfud :i ls tyk nsrk gS(vkSj tc pqukSfr;k¡ dfBu gks tkrh gSa rks ;g Nk= ds fy, HkkoukRed leFkZu esa o`f) dh ek¡x djrk gSA ,d vksj la;qä ifjokj ç.kkyh ds VwVus vkSj nwljh vksj ifjokj ds Hkhrj x`fg.kh&jkst+xkj eMy dk Nk=ksa ds HkkoukRed thou ij xgjk çHkko iM+rk gSA oÙkZeku le; ds ,dy ifjokj ds ifj.kkeLo:i ;qokvksa dh HkkoukRed larqf"V ds fy, de volj feyrs gSa] [kkldj tc mu ij ijLij fojksèkh vis{kkvksa dh o"kkZ gksrh gS] ftlls os vlgk; vkSj Hkzfer gks tkrs gSaA ?kj esa HkkbZ&cguksa dh de la[;k vkSj jkstxkj vkSj vU; etcwfj;ksa ds dkj.k ?kjksa ls ekrkvksa dh vuqifLFkfr us ;qok Nk=ksa dh leL;kvksa dks vkSj c>+k fn;k gS vkSj mUgsa vius lhfer lalkèkuksa ds lkFk lekt ds fofHkUu oxksZa ls mu ij yxkbZ tkus okyh pqukSfr;ksa dk Lo;a lekèkku djuk gksxkA blfy, ruko dks Nk= ds thou dk ,d lkekU; fgLlk dgk tk ldrk gS D;ksafd mUgsa fofHkUu fgrèkkjdksa dh ijLij fojksèkh ek¡xksa dks iwjk djuk gksrk gSA Nk=ksa ds chp ruko vdknfed {ks= vkSj lekt ds chp ppkZ dk ,d egRoiw.kZ fo"k; gSA dbZ fo}kuksa us fofHkUu dks.kksa ls bl eqís dh tk¡p dh gS vkSj O;kid 'kksèk fd;k gS ysfdu ;g vklkuh ls ns[kk tk ldrk gS fd Nk=ksa esa mPp ruko cuk jgrk gS(vkSj bl çdkj ;g fu"d"kZ fudkyk tk ldrk gS fd fo"k; ij vfèkd è;ku nsus dh vko';drk gS ¼ cqlkjh] 2014½A ruko ds lzksrksa dks ruko ds :i esa tkuk tkrk gS vkSj Nk=ksa dks fofHkUu rukoksa dk lkeuk djuk iM+rk gS tks muds thou ds lHkh igyqvksa ls lacafèkr gksrs gSa ftuesa ifjokj ls ruko] nksLrksa ls ruko] lekt ls ruko] Ldwy ls ruko] ikjLifjd la?k"kksZa ds dkj.k ruko] foÙkh; ruko] vdknfed ruko vkfnA vkèkqfud fnuksa esa ruko ds lzksr varghu gSa vkSj cnyrs le; ds lkFk c>+rs jgrs gSa ysfdu bu rukoksa ls fuiVus ;k muls fuiVus ds fy, miyCèk lkèku de gSa vkSj os ,d Nk= ds fy, Hkh lhfer gSaA

17 fçaV ehfM;k vkSj baVjusV esa lekpkj ns[kdj Nk=ksa ds chp csolh vkSj volkn dks le<k tk ldrk gS] ftlls ;g crk;k tkrk gS fd gj lky ;qok Nk=ksa esa eknd æO;ksa ds lsou] fyax nqO;Zogkj] vkijkfèkd xfrfofèk;ksa] ruko ls lacafèkr chekj LokLF; vkSj vkRegR;k ds ekeys c>+ jgs gSaA Nk= vius thou esa fofHkUu dkjdksa ds ijLij fØ;k ds dkj.k rukoxzLr gksrs gSa] ysfdu fofHkUu rukoksa dh ckjhdh ls leh{kk djus ls irk pyrk gS fd muds }kjk lkeuk fd, tkus okys lHkh rukoksa esa ls] 'kS{kf.kd ruko fpark dk çkFkfed dkj.k cudj mHkjrk gS ¼ jaxLokeh] 1995½A vdknfed ruko Nk=ksa ds thou ds lHkh igyqvksa dks 'kkfey djrk gS ftlesa muds 'kS{kf.kd çn'kZu dks [krjs esa Mkyus dh {kerk gksrh gS vkSj blesa Nk=ksa dh fnu&çfrfnu dh xfrfofèk;ksa ls lacafèkr lHkh igyw 'kkfey gksrs gSa tSls cgqr vfèkd vlkbuesaV] vU; Nk=ksa ds lkFk çfrLièkkZ] foQyrk,a] iSls dh deh] vU; ds lkFk [kjkc lacaèk Nk=ksa ;k f'k{kdksa] ifjokj ds lkFk ?kj ij leL;k,¡ ¼ cqlkjh] 2014½A Nk=ksa ds chp iqjkuk ruko vkerkSj ij d{kkvksa ls vuqifLFkfr] ?kcjkgV] ruko] [kjkc LokLF;] vfLFkj O;ogkj vkSj 'kS{kf.kd çn'kZu esa fxjkoV ls tqM+k gksrk gSA bl çdkj] ruko dks vkerkSj ij fdlh Hkh O;fä ds çn'kZu ds fy, gkfudkjd ekuk tkrk gS vkSj vke yksxksa }kjk fdlh dh çn'kZu {kerk dks de djus ds fy, ekuk tkrk gSA ;g dbZ 'kksèkksa ¼DykdZ vkSj jhdj] 1986½ ds ekè;e ls vuqHkotU; :i ls lkfcr gqvk gSA ruko vkerkSj ij thoksa ds fy, gkfudkjd ds :i esa fuank dh tkrh gS ysfdu ;g le<uk gksxk fd ruko dk çfrdwy çHkko rc eglwl gksrk gS tc ruko dk Lrj vR;fèkd gksrk gSA 'kksèk ls irk pyk gS fd ruko dk çn'kZu ij Hkh ldkjkRed çHkko iM+ ldrk gS vkSj ckrsusg ¼2013½ us dgk fd lHkh ruko euq";ksa ds fy, gkfudkjd ugha gSa D;ksafd Þruko yksxksa dks phtksa dks djus ds fy, çksRlkfgr djrk gSA ;g mUgsa dqflZ;ksa ls gVk nsrk gS] phtksa ds ckjs esa vyx rjg ls lksprk gS vkSj leL;kvksa dk lekèkku >wa>rk gSA ruko yksxksa dks tkx:d vkSj laosnu'khy cukrk gS fd nwljs muds dk;ksZa ds ckjs esa D;k lksprs gSa vkSj mUgsa csgrj çn'kZu djus ds fy, tkx:d djrs gSaAß f'k{kk fdlh Hkh jk"Vª ds fodkl ds lkFk&lkFk thou ds lHkh {ks=ksa vkSj lHkh lkekftd vkfFkZd i`"BHkwfe ds yksxksa dh nSfud xfrfofèk;ksa esa egRoiw.kZ ;ksxnku nsrh gSA ,d O;fä ds pfj= dk fuekZ.k] lkFk gh ,d leqnk; ds Hkhrj laL"fr] fo"okl vkSj ewY;ksa dk lapj.k] lHkh py jgh çfØ;k,¡ gSaA fodflr Hkouksa] iDdh lM+dksa ;k cuk, x, iqyksa ds ctk; ,d vPNh rjg ls ifjHkkf"kr 'kSf{kd ç.kkyh] yacs le; esa jk"Vª ds l'kfädj.k dk fufoZokn

18 dkj.k gSA gekjs ns'k ds çR;sd O;fä ds vfLrRo dks lqfuf'pr djus ds fy,] ml vfLrRo dks çkIr djus esa f'k{kk ,d egRoiw.kZ ?kVd gS ¼ esFkk vkSj jk[kh] 1997½A vkSifuosf'kd çHkqRo ds ifj.kkeLo:i] vkt Hkkjr esa vkfèkdkfjd f'k{kk ç.kkyh fczfV'k f'k{kk ç.kkyh ij vkèkkfjr gS] tks vrhr dk vo'ks"k gSA oÙkZeku esa] Hkkjr esa] f'k{kk ç.kkyh ds fy, drZO; Øe'k% jkT; vkSj dsaæ ljdkjksa ds chp foHkkftr gSA nwljh vksj] Ldwyh f'k{kk dh lajpuk ,d jkT; ls nwljs jkT; esa dqN gn rd fHkUu gksrh gSA rfeyukMq esa] d{kk 1&5 dks çkFkfed fo|ky; f'k{kk ds :i esa] d{kk 6&8 dks eè; fo|ky; f'k{kk ds :i esa] d{kk 9&10 dks mPp fo|ky; f'k{kk ds :i esa vkSj d{kk 11&12 dks mPp ekè;fed fo|ky; ds :i esa oxÊ"r fd;k x;k gSA d{kk 1&5 dks vU; jkT;ksa esa çkFkfed Ldwy f'k{kk ds :i esa oxÊ"r fd;k x;k gSA f'k{kk dk vfèkdkj dkuwu ¼Hkkjrh; dkuwu vkSj U;k; ea=ky;] 2009½ ds rgr pkSng o"kZ dh vk;q rd ds lHkh fo|kfFkZ;ksa ds fy, f'k{kk dks eq¶r vkSj vfuok;Z cuk fn;k x;k gSA d{kk 10 vkSj d{kk 12 nksuksa dh ijh{kkvksa dks iwjk djus ds fy, Nk=ksa dks dsaæh; cksMZ ;k jkT; cksMZ }kjk ç'kkflr dBksj] ekudh"r ijh{kkvksa esa U;wure vad çkIr djuk pkfg, A gkyk¡fd] f'k{kk ds fofHkUu cksMksZa ds ikBîØe vkSj ikBîØe ds lkFk&lkFk f'k{k.k vkSj ewY;kadu ds fy, muds „f"Vdks.k vyx&vyx gksrs gSaA rfeyukMq esa vfèkdka'k jkT; cksMZ Ldwy dyst f'k{kk ds fy, Nk=ksa dks rS;kj djrs gSa] tcfd dsaæh; cksMZ laLFkku iwjs Hkkjr esa dyst ços'k ds fy, Nk=ksa dks rS;kj djrs gSaA dsaæh; cksMZ ds ikBîØe vkSj ijh{kk dks vkerkSj ij T;knkrj ekeyksa esa jkT; cksMZ ds ikBîØe vkSj ijh{kk dh rqyuk esa vfèkd dfBu ekuk tkrk gSA yhi o"kZ dks NksM+dj] Hkkjrh; 'kS{kf.kd o"kZ çR;sd o"kZ twu ls ekpZ@vçSy rd QSyk gksrk gSA çR;sd o"kZ] Nk= vius 'kS{kf.kd o"kZ ds lekiu ij cksMZ ijh{kk nsrs gSa] tks vxys o"kZ ekpZ ;k vçSy esa gksrk gSA dsaæh; cksMZ ijh{kkvksa esa] ik¡p fo"k; gksrs gSa ¼çR;sd vfèkdre 500 vadksa ds lkFk½] tcfd jkT; cksMZ ijh{kk esa Ng fo"k; gksrs gSa ¼vfèkdre 1200 vadksa ds lkFk½A tc fdlh Nk= dks cksMZ ijh{kk esa i;kZIr vad ugha feyrs gSa] rks mlds dyst esa Lohdkj fd, tkus dh laHkkouk dkQh de gksrh gSA ns'k esa ,d çfl) fo"ofo|ky; esa ços'k ds fy, vkosnu djrs le;] lcls egRoiw.kZ vko';drkvksa esa ls ,d bu ijh{k.kksa esa vPNs vad çkIr djuk gSA

19 viuh cksMZ ijh{kkvksa ds vykok is'ksoj Ldwyksa tSls esfMdy] bathfu;fjax] ;k dkuwu laLFkkuksa ds fy, " ços'k ijh{kk" fy[kuh pkfg, A çeq[k fo"ofo|ky;ksa esa ços'k ikus ds fy,] Nk=ksa dks viuh ços'k ijh{kkvksa esa larks"ktud ifj.kke çkIr djus dh laHkkouk dks c>+kus ds fy, " Vîw'ku" ds :i esa tkus tkus okys Ldwy ds ckn ds l=ksa esa Hkkx ysuk pkfg,A yxHkx 80 izfr"kr cPps fefMy Ldwy ls gh Vîw'ku d{kkvksa esa Hkkx ysuk 'kq: dj nsrs gSaA thou ds ckjs esa ckr djrs gq,] tks igys ls gh vdknfed :i ls ncko esa Nk=ksa dks ns[krs gSa] oekZ ,V vyA ¼2002½ us Vîw'ku dks " bl] cqjs vuqHko dk ,d u;k vkSj fodkl'khy okrkoj.k" ds :i esa ifjHkkf"kr fd;kA Vîw'ku esa Hkkx ysus ds fy,] Nk=ksa dks bl xfrfofèk ds fy, vfo"oluh; le; nsuk pkfg,] ftlls vdknfed ruko ds fy, mudk tksf[ke c>+ tkrk gSA ,d vkSj cM+k eqík ftlls Nk=ksa dks fuiVuk iM+k] og Fkk lkekftd rqyuk dk eqíkA Hkkjrh; ifjokjksa esa] Nk=ksa ds fy, muds HkkbZ&cguksa] fj'rsnkjksa vkSj lkfFk;ksa dh rqyuk esa mudh 'kS{kf.kd miyfCèk ij vk¡dk tkuk csgn lkekU; gSA bl 'kSf{kd ç.kkyh esa vdknfed ruko ds dbZ çeq[k ewy gSa] ftuesa ls çR;sd dh ppkZ uhps dh xbZ gSA O;kolkf;d f'k{kk vkSj dSfj;j ds fodkl ij è;ku dsafær djus] jk"Vªh; vkSj {ks=h; Lrjksa ij 'kSf{kd ç.kkfy;ksa esa varj vkSj ehfM;k ,Dlikstj lfgr dbZ eSØks&Lrjh; pj }kjk vdknfed ruko c>+k fn;k x;k gS A Nk=ksa dh 'kS{kf.kd miyfCèk;ksa dks u dsoy mudh O;fäxr mUufr ds fy,] cfYd muds ifjokjksa dh mUufr ds fy, Hkh egRoiw.kZ ekuk tkrk gSA fopkj ruko ,d lkekU; ,glkl gSA ruko ds nks eq[; çdkj gSa % rhoz ruko % ;g vYidkfyd ruko gS tks tYnh nwj gks tkrk gSA vki bls rc eglwl djrs gSa tc vki czsd yxkrs gSa] vius lkFkh ds lkFk <xM+k djrs gSa] ;k ,d [kM+h >yku ij Ldh djrs gSaA ;g vkidks [krjukd fLFkfr;ksa dk çcaèku djus esa enn djrk gSA ;g rc Hkh gksrk gS tc vki dqN u;k ;k jksekapd djrs gSaA lHkh yksxksa dks dHkh u dHkh rhoz ruko gksrk gSA fpj ruko % ;g ruko gS tks yacs le; rd jgrk gSA ;fn vkidks iSlksa dh leL;k] n%q[kh fookg] ;k dke esa ijs'kkuh gS rks vkidks iqjkuk ruko gks ldrk gSA fdlh Hkh çdkj dk ruko tks g¶rksa ;k eghuksa rd pyrk gS] og iqjkuk ruko gSA vki iqjkus ruko ds brus

20 vH;Lr gks ldrs gSa fd vkidks irk gh ugha pyrk fd ;g ,d leL;k gSA ;fn vki ruko dks çcafèkr djus ds rjhds ugha [kkstrs gSa] rks blls LokLF; leL;k,¡ gks ldrh gSaA 1-2-1 ruko dk ysu&nsu eMy yktj vkSj QksdeSu ¼1984½ us ruko esa 'kkfey euksoSKkfud çfØ;kvksa dk ,d eMy fodflr fd;k FkkA bu ys[kdksa ds vuqlkj] ge ;g fu"d"kZ fudkyrs gSa fd laHkkfor rukoiw.kZ ?kVukvksa dh O;fä dh laKkukRed O;k[;k ds lanHkZ esa ruko dks le<uk lcls vPNk gSA ?kVukvksa dks Lo;a oLrqfu"B ?kVukvksa dh rqyuk esa vfèkd egRoiw.kZ ekuk tkrk gSA ;g ekuk tkrk gS fd] ruko u rks i;kZoj.kh; mÙkstuk gS vkSj u gh HkkoukRed çfrfØ;k gS] cfYd i;kZoj.kh; ek¡xksa vkSj muls fuiVus dh {kerk ds chp ,d lacaèk gSA bl çdkj] ruko dks O;fä vkSj i;kZoj.k ds chp ,d ysu&nsu ds :i esa ns[kk tkrk gSA bl ysu&nsu esa nks egRoiw.kZ çfØ;k,¡ cph jgrh gSa%& ewY;kadu vkSj eqdkcyk euksoSKkfud ewY;kadu O;fä;ksa dh fLFkfr vkSj blls fuiVus ds fy, miyCèk lalkèkuksa ds fujarj ewY;kadu dks lanfHkZr djrk gS ¼yktj ,aM n Qksd eSu] 1984(yktj] 1999 esa½A tc dksbZ O;fä laHkkfor rukoiw.kZ fLFkfr dk lkeuk djrk gS] rks og laHkkfor [krjs dh ek=k ds lkFk&lkFk ml [krjs ls fuiVus ds fy, muds lalkèkuksa dk ewY;kadu djrk gSA O;fä;ksa dks ruko dk vuqHko rc gksrk gS tc dfFkr [krjs dk lkeuk djus ds fy, dfFkr miyCèk lalkèkuksa ls vfèkd gks tkrk gSA ,d rukoiw.kZ fLFkfr ¼yktj] 1999½ ls fuiVus ds fy, eqdkcyk djus dks O;fä;ksa ds ç;kl] laKkukRed vkSj O;ogkfjd ds :i esa ifjHkkf"kr fd;k x;k gSA nwljs 'kCnksa esa] ge dg ldrs gSa fd ruko ,d xfr'khy çfØ;k gS ftlesa O;fä vkSj i;kZoj.k nksuksa 'kkfey gksrs gSaA i;kZoj.k çkjafHkd mÙkstuk çnku djrk gS] ysfdu ruko ds çeq[k fcanq gSa ftl rjg ls O;fä i;kZoj.k dks ekurk gS vkSj bldk lkeuk djus ds fy, pqus x, lalkèkuksa dk eqdkcyk djrk gSA bl vè;;u ds ekeys esa eqdkcyk djus vkSj ruko çcaèku j.kuhfr;ksa dks ,d nwljs ds i;kZ; ds :i esa mi;ksx fd;k tkrk gSA ruko dks bl çdkj ifjHkkf"kr fd;k x;k gS %& fu;fer çfrfØ;k ;k çfrfØ;k dh rqyuk esa 'kjhj dh xSj&fof'k"V çfrfØ;k dks ruko dgk tkrk gS ¼jkslsugSe Mh,y] vkSj lsfyxeSu ,ebZ-1989(lsyh ,pA 1974 ds vuqlkj½A ruko dks HkkoukRed xM+cM+h ;k ruko ds dkj.k gksus okys la'kksèku ds :i esa Hkh ifjHkkf"kr fd;k tkrk gSA ;g ,d ,slh çfØ;k gS ftlds }kjk ge O;fäxr „f"Vdks.k vkSj muds ifj.kkeksa ¼ek;lZ Mhth- 2005 ds vuqlkj½ dks le<rs gSaA ruko dk dkj.k cuus okyh O;fäxr vkSj i;kZoj.kh; ?kVukvksa dks ruko ds :i esa tkuk tkrk gS ¼yktj ds vuqlkj] 1990½A

21 og ruko tks lh[kus dks leFkZu vkSj lqfoèkk çnku djrk gS] mls vPNk ruko dgk tkrk gS] ruko tks lh[kus dks jksdrk gS vkSj mlesa ckèkk Mkyrk gS mls [kjkc ruko ds :i esa tkuk tkrk gSA cqjk ruko Lohdk;Z ugha gksuk pkfg, vkSj blls cpuk pkfg, ¼fyu vkSj tsik ds vuqlkj] 1984 esa½A ;g egRoiw.kZ gS fd ,d gh ruko dks vyx&vyx yksxksa }kjk muds O;fäRo y{k.kksa] lkaL"frd i`"BHkwfe] vuqHko vkSj yksxksa ds eqdkcyk dkS'ky ds vkèkkj ij vyx&vyx ekuk tk ldrk gSA ¼1998 esa dQ+eSu] Ms vkSj esfUlad ds vuqlkj½A ekè;fed f'k{kk dh i`"BHkwfe Nk=ksa ds fy, rukoiw.kZ okrkoj.k gSA fo"o LokLF; laxBu ¼MCY;w,pvks½ ds vuqlkj] nqfu;k esa chl çfr'kr cPpksa esa ekufld LokLF; leL;k,¡ gSa& ¼lkbMd jsektk dsflgkru 2009 ds vuqlkj½A dbZ vè;;uksa us ekufld] HkkoukRed vkSj 'kkjhfjd #X.krk ¼,DVsfdu] djeu] lsuksy] ,MZse] ,jsfUxu vkSj ,dk;fMu] 2001(Mkgfyu] tksucxZ] vkSj dbZ vU; euksoSKkfudksa ds vuqlkj½ ruko ds udkjkRed lacaèk dk [kqyklk fd;k gSA iqjkus vkSj vR;fèkd ruko ls 'kkjhfjd] HkkoukRed vkSj ekufld LokLF; leL;kvksa ¼osfuvksekdh ihVh] 1999½ us vkRe&lEeku dks de dj fn;k ¼lSMd chts] 2000½A ekè;fed fo|ky; ds Nk=ksa ij ruko dk vuqeku yxk;k tkuk pkfg,] vkSj bls lqèkkjus ds fy, fodflr j.kuhfr;ksa dks O;fäxr vkSj fLFkfrtU; nksuksa dkjdksa ij è;ku dsafær fd;k tkuk pkfg,A lQy vkSj mi;qä eqdkcyk djus dh j.kuhfr;k¡ dsoy çHkkoh vkSj mfpr j.kuhfr;ksa dk mi;ksx djds ekufld vkSj 'kkjhfjd LokLF; ij rukoiw.kZ fLFkfr;ksa ij Bksdj [kkus dh 'kfä dks jksd ldrh gSa] ftlls yksxksa dks vius ruko ds Lrj dks lqèkkjus esa enn feysxhA eqdkcyk djus dh j.kuhfr;ksa dks nks çdkjksa esa ck¡Vk x;k gS(1- leL;k&dsafær vkSj 2-Hkkouk dsafærA leL;k&dsafær eqdkcyk leL;k dks lqy<kus ;k ruko ds lzksr dks cnyus ds fy, dqN djus ij dsafær gSA Hkkouk&dsafær eqdkcyk djus dh j.kuhfr dk mís'; ifjfLFkfr;ksa ls tqM+s HkkoukRed ladV dks NksM+uk vkSj çcafèkr djuk gSA Hkys gh vfèkdka'k rukodÙkkZ nksuksa çdkj ds eqdkcyk djrs gSa ;kuh leL;k&dsafær eqdkcyk rc çcy gksrk gS tc lewg dks yxrk gS fd dqN ennxkj laHko gksxk] tcfd Hkkouk&dsafær eqdkcyk rc çcy gksrk gS tc lewg dks yxrk gS fd ruko dqN ,slk gS ftls lgu fd;k tkuk pkfg,] ik¡p vk;keksa dh lS)kafrd :i ls leh{kk dh tkrh gS leL;k&dsafær eqdkcyk djus ds vyx&vyx igyw bl çdkj gSaA lfØ; eqdkcyk] ;kstuk] çfrLièkÊ xfrfofèk;ksa dk neu] la;e ls eqdkcyk] 'kkfey lkekftd leFkZu dh ek¡x(ik¡p vk;ke mu igyqvksa dk

22 vkdyu djrs gSa ftUgsa Hkkouk&dsafær eqdkcyk ds :i esa ns[kk tk ldrk gS ¼HkkoukRed lkekftd leFkZu dh ryk'k] ldkjkRed iquO;kZ[;k] Loh"fr] budkj] èkeZ dh vksj eqM+uk½(vkSj Ng vk;ke mu çfrfØ;kvksa dk eqdkcyk djus dk vkdyu djrs gSa tks de mi;ksxh gSa ¼Hkkoukvksa ij è;ku dsafær djuk vkSj fudkyuk ¼osafVax½] O;ogkfjd fo?kVu] ekufld fo?kVu ¼vkRe O;kdqyrk½] gkL;] inkFkZ dk mi;ksx] vkRe&nks"k½A eqdkcyk djus dh j.kuhfr;ksa dk ;fn çHkkoh >ax ls mi;ksx fd;k tkrk gS rks os 'kkjhfjd] HkkoukRed vkSj ekufld LokLF; ij rukoiw.kZ fLFkfr ds vokafNr çHkkoksa dks de dj ldrs gSaA cM+s gksus dh çfØ;k esa lHkh cPps ruko dk vuqHko djrs gSaA ;s vuqHko laHkkfor :i ls bl ek;us esa ewY;oku gSa fd os çHkkoh eqdkcyk j.kuhfr;ksa ds fodkl dks c>+kok ns ldrs gSa] ftlesa crk;k x;k gS fd 6 o"kZ ls de mez ds cPps vius thou esa ruko ds çfr mÙkjnk;h gksrs gSaA ;|fi os ruko ds egRoiw.kZ Lrjksa ds laidZ esa gSa] cPpksa esa ruko dks le<us ds fy, vko';d vuqHko vkSj ifjiDork nksuksa dh deh gks ldrh gS vkSj blls çHkkoh >ax ls fuiVus ds fy, ckSf)d vkSj HkkoukRed lalkèkuksa dh deh gks ldrh gS] dqN tkjpdrkZvksa us lq<ko fn;k gS fd ruko dh mifLFkfr dk mi;ksx mPp fuekZ.k ds fy, mRiknd :i ls fd;k tk ldrk gSA fpark ds fy, Hkfo"; dh çfrj{kk ds Lrj us rdZ fn;k fd ruko ds lhfer vkSj çcaèkuh; Lrj ekStwnk ds fy, pqukSfr;k¡ vkSj #fp çnku djrs gSaA 1-2-2 ruko vkSj f"k{kk i>+kbZ esa ruko ;k vdknfed ruko dks ewy :i ls ml çHkko ds :i esa ifjHkkf"kr fd;k tkrk gS tks 'kSf{kd laxBu vius Nk=ksa ij mRiUu dj ldrs gSaA blds vykok] eqvukst+ ¼2003 esa½ dgrk gS fd Nk=ksa esa ruko ij fofHkUu vè;;uksa esa pkj çdkj dh rukoiw.kZ fLFkfr;ksa dh igpku dh xbZ gSA 1- vkdyu % tc f'k{kk dh fofHkUu èkkjkvksa dh ijh{kk esa Qsy gksus ls Mjus ds dkj.k mudk ewY;kadu gksus ij fo}ku fpafrr eglwl djrs gSaA ijh{kk ds vfèkd Hkkj ds dqN vkSj dkj.k tSls ,d gh le; esa dbZ ijh{kk,¡ ;k cM+s ikBîØe ds cks< vkSj vfuf'prrk ds lkFk ijh{kk dh rS;kjh ¼ftl rjg ls f'k{kd }kjk ijh{kk dk ewY;kadu fd;k tk,xk] mlds ckjs esa vfuf'prrk½A

23 2- dk;Z vfèkHkkj % vR;fèkd dk;Z] vR;fèkd d{kk ds ?kaVs] le; dh ;kstuk cukus esa dfBukb;k¡] [kkyh le; dh deh] 'kS{kf.kd thou vkSj O;fäxr thou ds la;kstu esa dfBukb;k¡] ,dkxzrk cuk, j[kus esa dfBukb;k¡] O;ogkfjd xfrfofèk;ksa dh ek¡x vkSj vlQy d{kk,¡¡A 3- lh[kus dh çfØ;k dh vU; 'krZsa % f'k{kd vkSj Nk=ksa ds chp lacaèk ftlesa f'k{kd 'kSyh] f'k{kd fo'ks"kKrk] f'k{kd O;fäRo] Nk=ksa dh çfrfØ;k vkSj leFkZu] mís';ksa esa vis{kk,¡ vkSj la?k"kZ] Hkwfedk vLi"Vrk vkfn tSls pj 'kkfey gSaA nwljh vksj] laxBukRed pj tSls vuqlwph] ikBîØe ;kstuk] d{kk dk vkdkj] HkkSfrd fLFkfr vkSj lalkèku] vkSj fu.kZ; ysus dh çfØ;k esa Nk=ksa dh Hkkxhnkjh ,d rukoiw.kZ okrkoj.k cuk ldrh gSA 4- f'k{kk esa vuqdwyu vkSj laØe.k leL;k % Nk= ,d çfrLièkÊ 'kS{kf.kd okrkoj.k esa ,d ubZ Hkwfedk] fu;eksa] ftEesnkfj;ksa vkSj ek¡xksa ds fy, ,d vuqHko çkIr djus ds fy, ç;kl djrs gSaA i>+kbZ esa rukoiw.kZ fLFkfr;ksa dk Nk= ds LokLF; vkSj çn'kZu nksuksa ij udkjkRed çHkko iM+rk gSA LokLF; dks è;ku esa j[krs gq,] ruko dk Nk= çfrj{kk ç.kkyh ij udkjkRed çHkko iM+rk gSA yacs le; esa] udkjkRed çHkko ladV] tyu] volkn] de vkRelEeku] fj'rksa esa dfBukb;ksa] nokvksa ds lsou vkfn ij çfrfcafcr gks ldrs gSaA tc Nk= mPp Lrj ds ruko dk vuqHko djrs gSa] rks ;g fLFkfr mudh çsj.kk] ijh{kk çn'kZu] d{kk lgk;rk vkSj d{kk ds çn'kZu dks udkjkRed :i ls çHkkfor djrh gSA vYikofèk esa] Nk= viuh HkkoukRed fLFkfr ¼ijh{kk ls lacafèkr fpark½ HkkoukRed çfrfØ;kvksa ¼flxjsV vkSj dQh dk lsou] Hkw[k vkfn½ esa cnyko dk vuqHko dj ldrs gSaA 1-3 ruko ds y{k.k ruko 'kjhj ij blds mfpr vuqdwyu ds fy, ek¡x djrk gSA vxj bls lkoèkkuh ls u laHkkyk tk, rks ;g 'kjhj ds fofHkUu jksxksa dks tUe ns ldrk gSA urhtru] gj chekjh ,d fuf'pr ek=k esa ruko dk dkj.k curh gS] D;ksafd blds fy, vuqdwyu dh vko';drk gksrh gSA ruko ds çHkkoksa dk mipkj fofHkUu mipkjksa tSls 'kd Fksjsih] HkkSfrd fpfdRlk] O;kolkf;d fpfdRlk vkfn }kjk fd;k tk ldrk gSA ;fn ge vuqdwyh {kerk Lrj ls ijs tkrs gSa rks ruko ds çHkko gkfudkjd gksrs gSaA ruko 'kjhj ds lcls detksj fgLls dks

24 çHkkfor djrk gS] tks raf=dk ra=] tBjk¡= lacaèkh ekxZ] ân; dh leL;kvksa vkfn tSls fofHkUu jksxksa ds :i esa çdV gksrk gSA mijksä fo'ys"k.k ds vkèkkj

100%	MATCHING BLOCK 12/145	SA	Anuradha.docx (D143802165)

ij ;g fu"d"kZ fudkyk tk ldrk gS fd

ruko dksbZ ekufld jksx ugha cfYd ekufld jksxksa dk ewy dkj.k gSA ;fn ge dqN lVhd 'kCnksa esa ruko dks Li"V djuk pkgrs gSa] rks ;g dgk tk ldrk gS fd ruko dh fLFkfr vkSj eu dh fLFkfr ds chp larqyu dh deh gSA ;kuh tc fdlh O;fä ds lkeus ,slh leL;k ;k fLFkfr mldh {kerkvksa ds fu;a=.k ls ckgj gks tkrh gS] ;kuh ml ijs'kkuh okyh fLFkfr ls fuiVus dh mldh {kerk de gks jgh gSA vxj dksbZ [kqn dks detksj vkSj v{ke eglwl dj jgk gS] rks O;fä rukoxzLr gks tkrk gSA bl çdkj] ge dg ldrs gSa fd le;≤ ij 'kjhj vkSj eu ds lkeus vkus okyh pqukSfr;k¡] ftUgsa og [kqn dks vlgk; vkSj lkeuk djus esa vleFkZ ekurk gS] ml fLFkfr esa ruko dks tUe nsrh gSA ruko ,d vlarqyu dh fLFkfr gS tks ,d tkuoj dks viuh mÙksftr voLFkk dks leklr djus ds fy, dqN djus ds fy, çsfjr djrh gS ¼xsV~l ,V vy½A rks ;g Li"V gS fd ruko fdlh O;fä ds vlkekU; euksn'kk ;k O;ogkj dk ladsr gSA blesa og vius dks mfpr y{; dh çkfIr esa vlQy ikrk gSA dHkh&dHkh ;g Hkh ns[kk x;k gS fd tks dke ge lkekU; fLFkfr esa ugha dj ikrs gSa] mls ge ruko dh fLFkfr esa vklkuh ls dj ysrs gSaA ? ruko ,d çfrfØ;k gSA ? ruko ds mRiUu gksus ds dbZ dkj.k gks ldrs gSaA vr% ;g ,d cgqvk;keh çfØ;k gSA ? ruko esa ifjfLFkfr;k¡ O;fä ds fu;a=.k ls ckgj gksrh gSaA ? ruko ds dkj.k O;fä dks 'kkjhfjd vkSj

70%	MATCHING BLOCK 13/145	SA	Synopsis (Pratima Rani).docx (D145775938)

ekufld nksuksa leL;kvksa dk lkeuk djuk iM+rk gSA ? ruko dh fLFkfr ds fy,

dksbZ fuf'pr le; lhek ugha gSA ;g FkksM+s le; ds fy, vkSj yacs le; rd Hkh py ldrk gSA ;g bl ckr ij fuHkZj djrk gS fd ruko fdl dkj.k ls gqvkA ;g Li"V gS fd ;g ,d cgqvk;keh çfØ;k gS] tks ruko dh Hkkouk dks fodflr djrh gSA blls u dsoy 'kkjhfjd fLFkjrk cfYd dqN phtksa ij dke djus dh eu dh 'kfä Hkh vkgr gksrh gSA ruko dks eq[; :i ls nks çeq[k Hkkxksa esa n'kkZ;k tkrk gS tks bl çdkj gSa %
25 ? ldkjkRed ruko ? udkjkRed ruko ldkjkRed ruko % ruko dh bl fLFkfr esa O;fä rukoiw.kZ ?kVuk ls ijs'kku vkSj fpafrr ugha gksrk] cfYd lkèkuksa ls mldk lkeuk djus ds fy, mBrk gS] vkSj ml fLFkfr dks ,d pqukSrh ds :i esa ysrk gS] rkfd og {k.kksa dk vPNk mi;ksx dj ldsA ruko ds "kq: esa mldh lksp ldkjkRed cuh jgrh gS] vkSj vfèkd lrdZ vkSj tkx:d gksus ds dkj.k] og viuh {kerkvksa ds cy ij ml ?kVuk ls fuiVrk gSA bl çdkj ds ldkjkRed ruko esa O;fä dke djus ds fy, lkekU; ls vfèkd lfØ; gks tkrk gSA udkjkRed ruko % ;g ldkjkRed ruko ds Bhd foijhr gSA ,sls esa O;fä dk utfj;k udkjkRed gks tkrk gSA udkjkRed gksus ds dkj.k] og rukoiw.kZ fLFkfr ls fuiVus esa [kqn dks vleFkZ vkSj vlgk; ikrk gS] ftlls fpark iSnk djus dh laHkkouk c>+ tkrh gSA 1-4 "kSf{kd ruko dks le<uk Ldwyh f'k{kk ,d O;fä ds thou esa ,d cgqr gh vko';d Hkwfedk fuHkkrh gS vkSj ;g muds vdknfed dfj;j esa ,d egRoiw.kZ {k.k ds :i esa Hkh dke dj ldrh gSA bl fcanq ij] ,d Nk= dh 'kS{kf.kd miyfCèk ;g fuèkkZfjr djus esa egRoiw.kZ gS fd os viuh f'k{kk ds vxys Lrj ij tk,axs ;k ugha] tks cnys esa muds Hkfo"; ds is'ks dks fuèkkZfjr djrk gSA tc Nk= bl nkSjku vR;fèkd ek=k esa vdknfed ruko dk vuqHko djrs gSa] rks ifj.kke nwjxkeh vkSj yacs le; rd pyus okys gks ldrs gSaA vkt ds vR;fèkd çfrLièkÊ ekgkSy esa Nk=ksa ds lkeus dbZ rjg ds 'kS{kf.kd eqís gSa] ftuesa ijh{kk dk ruko] ikBksa esa Hkkx ysus esa mnklhurk vkSj fdlh fo"k; dks le<us esa vleFkZrk 'kkfey gSA tc vdknfed ruko dh ckr vkrh gS] rks ;g vuqekfur 'kS{kf.kd ckèkkvksa ;k foQyrk] ;k ;gk¡ rd fd vdknfed foQyrk dh laHkkouk ds Hk; ls tqM+h ekufld ihM+k dks lanfHkZr djrk gSA ,d Nk= ds ifjos'k esa] Ldwy esa] ?kj ij] muds led{k lacaèkksa esa] vkSj ;gk¡ rd fd muds rRdky iM+ksl esa Hkh 'kS{kf.kd ncko fofHkUu rjhdksa ls çdV gksrs gSa A "kSf{kd ruko ds vR;fèkd Lrj ls euksoSKkfud vkSj 'kkjhfjd eqíksa tSls fd volkn] fpark] ?kcjkgV vkSj ruko ls lacafèkr chekfj;ksa dh ?kVukvksa esa o`f)

87%	MATCHING BLOCK 11/145	SA	Anamika Tiwari Thesis.pdf (D144837136)

gks ldrh gS] ftldk Nk=ksa ds 26 'kS{kf.kd çn'kZu

ij udkjkRed çHkko iM+ ldrk gSA ;g vuqeku yxk;k x;k gS fd nqfu;k esa 8 çfr'kr fd'kksj vkSj ;qok fpark dh leL;k ls ihfM+r gSaA Nk=ksa dh lkekftd] HkkoukRed vkSj vdknfed :i ls lQy gksus dh {kerk mudh fpark vkSj ruko dh Hkkoukvksa ls dkQh ckfèkr gksrh gSA dyst ds Nk= rsth ls volkn ls ihfM+r gks jgs gSa] tks rsth ls lcls vfèkd ckj gksus okyh ekufld vLokLF; dh fLFkfr curh tk jgh gSA ,d O;fä dh "kSf{kdvlarks"k] "kSf{kdla?k"kZ] "kSf{kdfpark vkSj "kSf{kdncko dh Hkkouk,¡ Hkh muds xzsM esa ifjyf{kr gksrh gSaA "kSf{kdruko ds pkj ?kVd gSa tks vkerkSj ij gj ,d Nk= esa ns[ks tk ldrs gSa % "kSf{kd fujk'kk] "kSf{kd la?k"kZ] "kSf{kd fpark,¡] vkSj "kSf{kd nckoA VsLV] xzsM] gkseodZ] vdknfed vkSj lQyrk dh mEehnsa] vkSj ikfjokfjd ncko gkbZ Ldwy ds Nk=ksa }kjk vius Lo;a ds ços'k ds vuqlkj vuqHko fd, tkus okys lcls vke 'kS{kf.kd nckoksa esa ls gSaA [kjkc f'k{k.k rduhd] f'k{kd&Nk= dh ckrphr] cM+h ek=k esa 'kS{kf.kd dk;Z] [kjkc 'kkjhfjd d{kk ifjos'k] Ldwy ds lkFk [kkyh le; dks la;ksftr djus esa dfBukbZ] vkSj 'kS{kf.kd dk;Z vkSj le; lkfj.kh ds vklikl vjktdrk Ldwy ls lacafèkr ncko ds lHkh mnkgj.k gSaA vfrfjä rukoksa esa 'kS{kf.kd vko';drkvksa dks iwjk djus dk ç;kl] le; çcaèku ds ckjs esa fpark,¡ vkSj xzsM vkSj ijh{kk ifj.kkeksa ij fpark] vU; 'kkfey gSaA urhtk] Nk=ksa dks vdknfed ruko dk udkjkRed ifj.kkeksa ls udkjkRed :i ls çHkkfor gkrs gq, ns[kk tkrk gSA nqfu;k Hkj esa Nk=ksa ds chp vkRegR;k dh c>+rh la[;k ds dkj.k] Nk=ksa dk ekufld LokLF;] fo'ks"k :i ls 'kS{kf.kd ruko vkSj blds ifj.kkeksa ds lanHkZ esa] f'k{kdksa vkSj jktusrkvksa ds chp ,d xaHkhj fpark dk fo"k; cu x;k gSA ySalsV fjiksVZ ds vuqlkj] Hkkjr esa ;qok yksxksa esa vkRegR;k dh nj nqfu;k esa lcls vfèkd gSA 'kksèkdrkZvksa us fn[kk;k gS fd vdknfed çn'kZu esa lqèkkj ds fy, ekrk&firk dk ncko vdknfed ruko dk lcls vke dkj.k gSA viuh ;qokoLFkk ds nkSjku] dqN cPps vius ekrk&firk }kjk vdknfed vkSj ikBîsrj xfrfofèk;ksa nksuksa esa mPp Lrj ds çn'kZu dks çkIr djus ds fy, yxkrkj mdlkus ds ifj.kkeLo:i xgjh raf=dk lacaèkh leL;kvksa dk lkeuk djrs gSaA vdknfed vkSj ijh{kk ruko vkSj ekrk&firk ds ncko vkSj ekufld fodkjksa ds chp ,d vPNk lacaèk LFkkfir fd;k x;

95%	MATCHING BLOCK 14/145	SA	Anuradha.docx (D143802165)

k gSA ;g è;ku j[kuk egRoiw.kZ gS fd

çR;sd cPps dk ,d vf}rh; ekufld laosnuk vkSj eqdkcyk djus dh {kerk gksrh gS] tks vxys ls fHkUu gksrh gSA urhtk] [kjkc eqdkcyk dkS'ky okys cPps fpark] fujk'kk vkSj vdknfed foQyrk ds Mj

27 ds çfr vfèkd laosnu'khy gksrs gSa] tks ,d Nk= dh nwljs ls rqyuk djus ls cpus dh vko';drk dks çnf'kZr djrk gSA Nk=ksa }kjk vuqHko fd, tkus okys mPp Lrj ds 'kS{kf.kd ruko ds vkyksd esa] ftlds ifj.kkeLo:i euksoSKkfud leL;k,¡ Hkh gks ldrh gSa] Nk=ksa esa ruko vkSj ekufld #X.krk ds bl Lrj dks de djus ds fy, mfpr gLr{ksi vkSj lekèkku cukus dh rRdky vko';drk gSA 1-5 Nk=ksa ds chp ruko ds dkj.k Nk=ksa ds chp ruko ds eq[; dkj.kksa ds :i esa fofHkUu dkjdksa dks ckjhdh ls ekuk x;k gSA dqN Nk=ksa us Ldwyh thou dks bruk dfBu ik;k gS fd os ftl rjg ds ruko dk lkeuk djrs gSa] mlds dkj.k og mUgsa lek;ksftr ugha dj ldrsA Nk=ksa esa ruko dh ek=k vfèkd gksus ds dkj.k mudk çn'kZu dkQh çHkkfor gqvk gSA dqN dks rks Ldwy NksM+us ds fy, Hkh etcwj fd;k x;k gS D;ksafd os ml ruko dks lgu ugha dj ldrs gSa] ftlls os xqtj jgs gSaA ;qok o;Ldksa ij 'kS{kf.kd ncko rhoz Lrj ij igq¡p x;k gSA lgh dyst esa ços'k ikus] vPNs xzsM cukus] vkSj dk;ZLFky esa lQyrk dh rS;kjh ds fy, loZJs"B baVuZf'ki esa mrjus dk ruko&;qok o;Ld ekufld LokLF; ij Hkkjh vlj Mkyrk gSA cgqr ckj] vdknfed lQyrk ;qok o;Ldksa ds lkekftd vkSj HkkoukRed fodkl dh dher ij vkrh gS vkSj f'k{kk ç.kkyh vkSj ukSdjh cktkj ij egkekjh dk çHkko enn ugha dj jgk gSA 'kS{kf.kd ncko ikfjokfjd vis{kkvksa] Nk=ksa }kjk Lo;a ds fy, fuèkkZfjr egRokdka{kh y{;ksa ;k lekt }kjk mu ij j[kh xbZ ek¡xksa ls vk ldrk gSA dksp vkSj Ldwy ç'kkld Hkh Nk=ksa dks lQy gksus ds fy, çsfjr dj ldrs gSaA vdknfed ncko dk lzksr tks Hkh gks] ifj.kke dbZ Lrjksa ij dY;k.k ds fy, gkfudkjd gks ldrs gSaA tc ;qok o;Ldksa dks yxrk gS fd mUgsa 'kkjhfjd LokLF;] lkfFk;ksa vkSj ifjokj ds lkFk ldkjkRed lacaèk] jpukRed vkRe&vfHkO;fä] vkSj fjpktZ djus ds fy, MkmuVkbe lfgr vU; lHkh phtksa ij vdknfed miyfCèk dks çkFkfedrk nsuh pkfg,&os ,d mPp ekufld LokLF; Vksy dk Hkqxrku djrs gSaA vdknfed ncko ls volkn] fpark fodkj ;k mPp&dk;Z'khy fpark gks ldrh gSA

28 Ldwyh Nk=ksa esa ruko ds dqN lkekU; dkj.kksa esa fuEufyf[kr 'kkfey gSa : ? thou dh rukoiw.kZ ?kVuk,¡& O;fä dh fnu&çfrfnu dh tfVyrk,¡ vkSj thou esa nq[kn ?kVuk,¡ ?kfVr gksuk ruko dk ,d çeq[k dkj.k gSA ? ldkjkRed „f"Vdks.k dk vHkko& vkt dk O;fä vkRecy vkSj thou 'kfä ds ekeys esa cgqr detksj gks x;k gS] ftlds dkj.k tc Hkh mlds lkeus dksbZ leL;k vkrh gS rks og cgqr tYnh pkSad tkrk gS vkSj foosdiw.kZ >ax ls lkspus ls mlds vanj udkjkRed fopkj vkrs gSa ;k mRiUu gksus yxrs gSaA urhtru] og dksbZ Hkh ç;kl djus ls igys [kqn dks v{ke eglwl djrk gS vkSj ifjfLFkfr;ksa ds lkeus vius gfFk;kj Mky nsrk gSA ? viuh {kerkvksa dk Bhd ls ewY;kadu u dj ikuk& vkt dh HkkxnkSM+ Hkjh ftanxh esa T;knkrj yksxksa ds ikl vius fy, vkjke ds nks iy Hkh ugha gksrs] ftlesa os pSu ls cSB ldsa vkSj vius ckjs esa xgjkbZ ls lksp ldsaA ,d O;fä dks ;g Hkh ugha irk gksrk gS fd og D;k dj ldrk gS] vkSj mlesa D;k dfe;ka gSa] ftlls og [kqn dks lqèkkj ldsA blfy, vkRe&ewY;kadu dh deh Hkh ruko dk ,d çeq[k dkj.k gSA ? -nwljksa ij fuHkZj jgus dh vknr& thou esa rukoeqä vkSj [kq'k jgus dk lcls vPNk rjhdk gS vkRe fuHkZj jguk vkSj nwljksa ls fdlh Hkh rjg dk Hkyk djus ;k djus dh mEehn u djuk ysfdu vly ftanxh esa ,slk ugha gksrk gS- vkt yksxksa esa vius dke ds fy, [kqn ij vkSj nwljksa ij de fuHkZj jgus dh ço`fÙk c>+rh tk jgh gSA blfy, tc nwljksa dks mudh vis{kk ds vuq:i ifj.kke ugha feyrk gS rks O;fä rukoxzLr gks tkrk gSA ? LokFkZ vkSj vgadkj dh Hkkouk &oÙkZeku le; esa yksxksa esa c>+rs LokFkZ vkSj vgadkj dh Hkkouk us Hkh ruko dks c>+k fn;k gSA ? vkRe&lEeku vkSj vkRe&fo"okl dks c>+kok nsuk & tc fdlh O;fä esa Lo;a ds fy, lEeku dh Hkkouk ugha gksrh gS vFkkZr~~ mldk vfLrRo gksrk gS vkSj fo"okl dh deh gksrh gS] rks og rukoxzLr jgrk gSA o"kksZa esa "kSf{kd ncko c>+k gS] ijh{kk,¡] vlkbuesaV vkSj dbZ vU; xfrfofèk;k¡ gSa ftuesa ,d Nk= dks Qsjcny djuk iM+rk gSA u dsoy fMtkbu cfYd f'k{kd vkSj ekrk&firk Hkh vPNs xzsM çkIr djus ds fy, Nk=ksa ij cgqr ncko Mkyrs gSaA ;s vis{kk,¡ Nk=ksa dks yxkrkj dke

29 djus ds fy, etcwj djrh gSa vkSj vfèkd ruko iSnk djrh gSaA f'k{kkfonksa ds lkFk] ekrk&firk vkSj laLFkku pkgrs gSa fd Nk= ikBîsrj xfrfofèk;ksa esa Hkh Hkkx ysa] Nk=ksa ls ekStwnk mEehnsa ,d vy jkmaMj cuus dh gSaA ijke'kZ ds fy, mfpr ekè;eksa dh deh ls vfèkd Hkze gksrk gS vkSj Nk= dBksj vè;;u iSVuZ ds ckn Hkh vius fy, dfj;j pquus esa vleFkZ gksrs gSaA ekrk&firk vkSj f'k{kdksa ds bl ek¡xfyd joS;s ls Nk= grçHk jg tkrs gSa vkSj ruko iSnk djrs gSaA fd'kksj vkSj gkbZ Ldwy cPps ds O;fäRo vkSj thou ds çfr „f"Vdks.k dks vkdkj nsus esa ekSfyd Hkwfedk fuHkkrs gSaA lkfFk;ksa dk ncko ,d vkSj lkekU; 'kCn gS tks fd'kksjksa ls lquk tkrk gSA ;g nwljs ij 'kjkc ihus] èkweziku djus] ijh{kk esa èkks[kk nsus] <wB cksyus vkfn ds fy, ncko Mky ldrk gS] lwph laiw.kZ gSA lgdeÊ ncko gkfudkjd vkSj lEeksgd gks ldrk gSA ;g vareZq[kh Nk=ksa ds fy, O;fäRo dks ldkjkRed rjhds ls vkdkj nsus esa enn dj ldrk gS ;k ,d ckèkk ds :i esa çLrqr dj ldrk gS vkSj ruko iSnk dj ldrk gSA vfèkdka'k lkfFk;ksa ds ncko dks ldkjkRed cukus ds fy, Nk=ksa ds fy, Kku gksuk vkSj ldkjkRed yksxksa ds lkFk [kqn dks ?ksjuk csgn t:jh gSA Hkkjh 'kS{kf.kd dk;ZHkkj vkSj ;g eglwl djuk fd vki ,d vkSj le; lhek dks iwjk djus ds fy, yxkrkj nkSM+ jgs gSa] dfBu gks ldrk gSA cPpksa ij vius vè;;u esa pedus vkSj ikBîsrj xfrfofèk;ksa esa vPNk çn'kZu djus ds fy, ekrk&firk dk ncko mYys[kuh; :i ls vfèkd gSA i>+kbZ esa mR""Vrk çkIr djus ds fy, etcwj djus dh vko';drk] vDlj nqO;Zogkj dh laHkkouk gksrh gS] eukscy dks pksV igq¡pkrh gS vkSj ruko] foQyrk vkSj VwVus ds lcls cM+s dkj.kksa esa ls ,d gSA ekrk&firk ds chp ;g lkfcr djus dh nkSM+ esa fd mudk cPpk ,d vy jkmaMj gS] mUgsa lQy gksus ds ctk; f'kdkj ds :i esa lekIr dj nsrk gSA leFkZu dh deh Nk=ksa ds chp ruko dk çeq[k dkj.k gS] ekrk&firk vkSj f'k{kdksa ds lkFk ckrphr dh deh mu lansgksa vkSj Hkzeksa dk fuekZ.k djrh jgrh gS] tks varr% ,d cPps ds ruko dk dkj.k cu ldrs gSaA ,d cPps ls cgqr dqN gkfly djus dh mEehn dh tkrh gS] ysfdu mfpr leFkZu dh deh ds dkj.k] os leqæ esa [kks;k gqvk eglwl djrs gSa vkSj fn'kkghu gks tkrs gSaA yacs le; rd ruko 'kkjhfjd vkSj HkkoukRed fodkjksa dks tUe ns ldrk gS] ftlds ifj.kkeLo:i fpark vkSj volkn gks ldrk gSA fpark dks nwj djus ds fy, ,d pSuy dk gksuk t:jh gSA eSdsu ,V vy ¼2000½ dk ekuuk Fkk fd ruko] ruko ;k volkn dk ,dek= dkj.k ruko ugha gS] cfYd ruko vkSj O;fä ds „f"Vdks.k vkSj bu rukoksa ds çfr „ f"Vdks.k ds chp rkyesy ruko iSnk djrk gSA oSls rks ruko dks vDlj cqjk ekuk tkrk gS]

30 ysfdu flDds dk nwljk igyw ges'kk gksrk gSA lgh çdkj dk ruko fnekx vkSj ltxrk dks rst djus esa enn djrk gS] bl çdkj ;kn~nk'r c>+kus esa enn djrk gSA çHkkoh vkSj dq'ky dkedkt ds fy, gYdk ruko ges'kk vko';d gksrk gSA ;g nSfud pqukSfr;ksa dk lkeuk djus esa enn dj ldrk gS vkSj Nk=ksa dks vius y{;ksa rd igq¡pus ds fy, çsfjr dj ldrk gSA ruko iSnk djus okys vU; dkjd bl çdkj gS % 1- vkxkeh VsLV dbZ Nk= ,d ls vfèkd vkxkeh ijh{kk gksus ij vPNs xzsM çkIr djus ;k vè;;u ds fy, le; fudkyus dh fpark djrs gSaA ijh{k.k ruko dsoy la?k"kZjr Nk=ksa dks gh çHkkfor ugha djrk gS] ;g rks & mPp&çkIrdrkZ vkerkSj ij ijh{k.kksa esa vPNk çn'kZu djus ds ckjs esa cgqr vfèkd ruko dk vuqHko djrs gSaA 2- cgqr T;knk gkWeodZ tc vkidk cPpk gkWeodZ ls vfHkHkwr ;k fujk'k gks tkrk gS] rks mlds fy, vlkbuesaV iwjk djuk dfBu gks tkrk gSA ;g ,d rukoiw.kZ pØ dk dkj.k cu ldrk gS]tgk¡ gkWeodZ >sj gks tkrk gS vkSj vkids cPps ds ikl bls iwjk djus ds fy, le; ;k ÅtkZ ugha gksrh gS&ftlls vkSj Hkh vfèkd ruko gksrk gSA 3- ,d Hkkjh dk;ZHkkj pkgs og mUur Lrj dh d{kk,¡a gksa ;k vko';d vè;;u dh ek=k] Hkkjh dk;ZHkkj Nk=ksa ds fy, ruko dk ,d çeq[k lzksr gks ldrk gSA ;g iqjkus gkbZ Ldwy ds Nk=ksa ds fy, fo'ks"k :i ls vke gS D;ksafd os viuh ekè;fed ;kstuk,¡ cukuk 'kq: djrs gSaA 4- laxBu dk vHkko [kjkc laxBukRed dkS'ky okys Nk= Ldwy esa vfèkd ruko dk vuqHko djrs gSaA ;g vkerkSj ij blfy, gksrk gS D;ksafd os lh[kus ds fy, vko';d midj.kksa ;k le< ds lkFk Bhd ls
31 rS;kj ugha gksrs gSaA ;fn mu laxBu dkS'ky esa lqèkkj ugha gksrk gS] rks os ihNs jg ldrs gSa] ftlls Ldwy ds ckjs esa vfèkd ruko vkSj fujk'kk gks ldrh gSA 5- cgqr de le; O;Lr dk;ZØe okys Nk= tYnh ls vfHkHkwr gks ldrs gSa D;ksafd muds ikl vkjke djus ds fy, [kkyh le; ugha cpk gSA tSls&tSls vkidk cPpk çkFkfed fo|ky; ls gkbZ Ldwy esa vkxs c>+rk gS] Ldwyh dk;Z dh ek=k vkSj dfBukbZ dk Lrj c>+rk tkrk gSvkSj vPNs le; çcaèku dkS'ky ds fcuk Nk= vkSj Hkh vfèkd ruko dk vuqHko dj ldrs gSaA 6- [kjkc uhan i;kZIr uhan u ysus ls Nk=ksa ds fy, è;ku dsafær djuk vkSj çHkkoh >ax ls lh[kuk eqf'dy gks tkrk gSA ;g vkids cPps ds fy, ruko dh Hkkouk iSnk dj ldrk gS tc og d{kk esa ;k vlkbuesaV ij vPNk çn'kZu djus esa l{ke ugha gksrk gSA okLro esa] vè;;uksa ls irk pyk gS fd tks Nk= gj jkr vko';d 8&10 ?kaVs dh uhan ugha ysrs gSa] os ,slk djus okys Nk=ksa dh rqyuk esa ruko eglwl djus dh vfèkd laHkkouk j[krs gSaA 7- d{kk esa Hkkx ysuk dbZ cPpksa ds fy,] d{kk esa cqyk, tkus vkSj vius lgikfB;ksa ds lkeus cksyus dk fopkj Hk;kud gks ldrk gSA ;g fo'ks"k :i ls lp gks ldrk gS ;fn vkidk cPpk fdlh fo"k; ;k {ks= esa cus jgus ds fy, la?k"kZ djrk gS ¼lkekU; mnkgj.k xf.kr vkSj i>+uk gSa½A 8- leFkZu dh deh ekrk&firk ;k f'k{kdksa ls leFkZu dh deh] Hkys gh ;g dsoy ekuk tkrk gS] Nk=ksa dks cgqr vfèkd ruko ns ldrk gSA os eglwl dj ldrs gSa fd muls cgqr dqN visf{kr gS] ysfdu muds ikl vius y{;ksa dks çkIr djus ds fy, ,d etcwr i;kZIr leFkZu ç.kkyh ¼pkgs HkkoukRed ;k O;kogkfjd½ ugha gSA ;g ruko dk ,d vkSj dkj.k gS] tks fo'ks"k :i ls mPp LFkku çkIr djus okys Nk=ksa dks çHkkfor dj ldrk gSA
32 9- ,d u, okrkoj.k esa laØe.k ,d cM+k dne mBkuk dbZ Nk=ksa ds fy, ,d rukoiw.kZ le; gks ldrk gS] pkgs og ,d u, Ldwy esa 'kq: gks ;k çkFkfed fo|ky; ls gkbZ Ldwy esa laØe.k dj jgk gksA ubZ d{kk,¡a] u, f'k{kd vkSj ubZ fnup;kZ lHkh Nk=ksa ds fy, rukoiw.kZ gks ldrh gSa] vkSj mUgsa lek;ksftr djus esa le; yxrk gSA 10- d{kk,¡a tks cgqr dfBu gS tSls&tSls os Ldwy esa vkxs c>+rs gSa vkSj vfèkd mUur d{kk,¡a ysuk 'kq: djrs gSa] c>+rh dfBukbZ Nk=ksa ds fy, ruko dk dkj.k cu ldrh gSA vius gkbZ Ldwy ds oxksZa esa ços'k djus okys fd'kksjksa ds fy, ;g cgqr vke gSA tSls&tSls d{kk,¡a dfBu gksrh tkrh gSa] pqukSfr;ksa dk tYn lekèkku djuk egRoiw.kZ gksrk gS rkfd vkidk cPpk cgqr ihNs NwVus ls igys mls idM+ ldsA 11- fnup;kZ esa ifjorZu lefiZr gkseodZ le; vkSj yxrkj lksus ds dk;ZØe lfgr ,d fnup;kZ Nk=ksa dks muds fnu ds ekè;e ls ekxZn'kZu djus esa enn djrh gSA tc lkekU; fnup;kZ esa cnyko gksus yxrs gSa] rks vkids cPps dks vius le; dk çcaèku djuk vfèkd dfBu gks ldrk gS] ftlls vfèkd ruko gks ldrk gSA 1-6 Nk=ksa esa 'kS{kf.kd ruko dk çHkko cgqr de mez esa] cPpksa dks yxkrkj vkxs dh lksp ds fy, çksRlkfgr fd;k tkrk gS vkSj vdknfed :i ls ckn ds 'kS{kf.kd ehy ds iRFkj ds fy, [kqn dks rS;kj fd;k tkrk gSA vdknfed {ks= esa vxys dne dh yxkrkj vk'kadk dk ;g pØh; iSVuZ dkQh gkfudkjd gks ldrk gSA vdknfed ncko dks ,d vuqHko ds :i esa ifjHkkf"kr fd;k tkrk gS] ftlesa ^^,d Nk= fof'k"V 'kS{kf.kd y{;ksa dks çkIr djus ds fy, le; vkSj ÅtkZ dh ek¡x ds cks< ls nc tkrk gSA ruko fofHkUu laHkkfor lzksrksa ls vk ldrk gS vkSj HkkoukRed vkSj vdknfed nksuksa :i ls Nk=ksa ij vla[; çHkko Mkyrk gSAßmnkgj.k ds fy,] ;qok yksxksa ds fy, vkRe&yxk, x, vdknfed ncko dk vuqHko djuk csgn vke gSA ,d ;qok O;fä ckgjh lzksrksa ls vdknfed ncko eglwl dj ldrk gS ¼mnkgj.k ds fy,] fo"ofo|ky; esa Lohdkj fd,
33 tkus dh c>+rh çfrLièkÊ ç"fr] ekrk&firk] lkfFk;ksa ds lkFk fQV gksuk pkgrs gSa] vkfn½A ,sls fd'kksj gSa tks gYds 'kS{kf.kd ncko dk vuqHko djrs gSa vkSj blls ldkjkRed :i ls çsfjr gksrs gSa] ysfdu bldk mYVk Hkh lp gSA fd'kksjkoLFkk ds ekè;e ls ,d ;qok O;fä dh ifjiDork çfØ;k dk ,d fgLlk ;g lh[k jgk gS fd thou dh ek¡xksa dks dSls larqfyr fd;k tk,] vkSj 'kS{kf.kd ncko fdlh ds fodkl vkSj fodkl esa ckèkk cu ldrk gSA dbZ rjg ds vokafNr çHkko gSa tks ,d ;qok O;fä vdknfed ncko ls fodflr dj ldrk gSA 'kS{kf.kd ncko ds dkj.k fd'kksj ruko ds HkkoukRed vkSj@;k 'kkjhfjd y{k.kksa dk vuqHko dj ldrs gSaA vR;fèkd 'kS{kf.kd ncko ,d ;qok O;fä dks fuEufyf[kr mnkgj.kksa esa ls fdlh ds lkFk la?k"kZ djus dk dkj.k cu ldrk gS % • xzsM ds lkFk tquwu • fpark • vR;fèkd çfrLièkkZ • Hkw[k esa cnyko • yxkrkj dke djuk • mÙkstd nq#i;ksx ¼tSls] dSQhu] MDVj ds ipZs dh nok,¡ vkfn½ • uhan dh dfBukbZ • vkjke djus esa vleFkZrk • lkekftd vyxko • igys vkuafnr yhykvksa esa #fp dh gkfu vdknfed ncko ges'kk csgrj xzsM vkSj csgrj VsLV Ldksj dh vksj ugha ys tkrk gSA 'kksèk esa ik;k x;k gS fd vdknfed ruko ds vR;fèkd Lrj ds ifj.kkeLo:i " volkn] fpark] ?kcjkgV vkSj ruko ls lacafèkr fodkjksa tSlh euksoSKkfud vkSj 'kkjhfjd leL;kvksa dk çlkj c>+ ldrk gS"] tks cnys esa vdknfed ifj.kkeksa ij çfrdwy çHkko Mky ldrk gSA 1-7 'kS{kf.kd ruko vkSj 'kS{kf.kd çn'kZu ds chp lacaèk 'kSf{kd çn'kZu ,sls ifj.kke gSa tks ;g bafxr djrs gSa fd ,d O;fä fdl gn rd fof'k"V y{;ksa dks çkIr djus esa l{ke gS tks fd Ldwy] dyst ;k fo"ofo|ky; tSls funZs'kkRed

34 okrkoj.k esa xfrfofèk;ksa dk Qksdl FksA Ldwyksa dk mís'; fofHkUu fo"k;ksa esa laKkukRed y{;ksa dks ifjHkkf"kr djuk vkSj ,d fof'k"V ckSf)d {ks= esa Kku vkSj le< çkIr djuk gS ftlesa lkfgR;] foKku] bfrgkl] Hkwxksy vkfn 'kkfey gSaA pw¡fd Ldwyh f'k{kk esa egRoiw.kZ lksp ds fodkl ds lkFk&lkFk fo"k; fof'k"V Kku dk fodkl Hkh'kkfey gS] 'kS{kf.kd çn'kZu esa 'kkfey gSa lh[kus ds fofHkUu {ks=A 'kSf{kd çn'kZu ,d cgqvk;keh voèkkj.kk gS] ftldk eki bls ekius ds fy, mi;ksx fd, tkus okys ladsrdksa ij fuHkZj djrk gSA Ldwyh f'k{kk ,d 'kSf{kd miyfCèk ijh{k.k vkSj ckn esa miyfCèk ijh{k.kksa esa çkIr vadksa ;k çn'kZu esa lekIr gksrh gS] tks 'kSf{kd fMxzh vkSj çek.k i= ds ekè;e ls ifjyf{kr gksrh gSA fdlh O;fä ds ckSf)d ç;kl vkSj ckSf)d {kerk dk Lrj çkIr vadksa ls ifjyf{kr gksrk gS tks 'kS{kf.kd vH;kl dh lQyrk ;k foQyrk dks çekf.kr djrk gSA bl çdkj] Ldwy esa ;k ckn esa dyst ;k fo"ofo|ky; esa fofHkUu xzsMksa esa vdknfed çn'kZu vkSj çfØ;k esa vftZr fofHkUu 'kSf{kd fMxzh vkSj çek.k i=] fujarj vkSipkfjd ;k vukSipkfjd funZs'kkRed okrkoj.k ds çHkko esa ,d O;fä dh varfuZfgr ckSf)d {kerk ds fodkl dk çrhd gSA çR;sd 'kS{kf.kd l= ds var esa Nk=ksa }kjk çkIr vadksa }kjk ;k ekudh"r ewY;kadu }kjk ekik x;k vdknfed çn'kZu Ldwyh f'k{kk dks iwjk djrk gS tks ;g fuèkkZfjr djrk gS fd Nk=ksa dks viuh mPp f'k{kk tkjh j[kus dk volj feysxk ;k ughaA blfy,] le; ds lkFk vdknfed çn'kZu vkSj ifj.kkeh 'kSf{kd fMxzh çkIr djus ls f'k{kk ds ckn fdlh ds O;kolkf;d dfj;j ij çHkko iM+rk gSA ,d O;fä ds fy, vdknfed çn'kZu egRoiw.kZ gS vkSj jk"Vª ds fy, Hkh mruk gh egRoiw.kZ gS] D;ksafd fdlh jk"Vª dh laifÙk vkSj mldh le`f) ml ç.kkyh }kjk cuk, x, ekuo lalkèkuksa ij fuHkZj djrh gS ftls vdknfed çn'kZu ds lanHkZ esa ekik tkrk gSA vksbZlhMh ¼vkfFkZd lg;ksx vkSj fodkl laxBu½ }kjk vk;ksftr ihvkbZ,l, ¼varjkZ"Vªh; Nk= ewY;kadu dk;ZØe½ tSls 'kS{kf.kd miyfCèk ij varjkZ"Vªh; vè;;u mijksä dFku dks „>+rk ls lgh Bgjkrs gSaA ,sls dbZ dkjd gSa tks Nk=ksa ds 'kS{kf.kd çn'kZu dks çHkkfor djrs gSaA Nk= vkSj muds 'kS{kf.kd laLFkku nksuksa gh lekt ds lnL; gSa vkSj mu ij lekt ds fofHkUu ?kVdksa ds chp ckrphr dk çHkko vifjgk;Z gSA
35 ns'kksa esa Nk=ksa dks dbZ rjg ds ruko dk lkeuk djuk iM+rk gS tks fodflr ns'kksa esa vdYiuh; gSaA vkt rd] Nk=ksa ds ,d cM+s oxZ ds chp Hkkstu] vkJ; vkSj diM+ksa tSlh cqfu;knh lqfoèkkvksa dh deh dh leL;k,¡ çpfyr gSa vkSj bldk muds 'kS{kf.kd çn'kZu ij cgqr vfèkd çHkko iM+rk gSA thou ds gj {ks= esa vkSj vfèkd çfrLièkÊ cuus dh vko';drk Hkh c>+ jgh gSA ijh{kkvksa esa çkIr vadksa ls feyrs&tqyrs vdknfed çn'kZu dks Nk=ksa ds lexz çn'kZu dk lcls vPNk ladsrd ekuk tkrk gS vkSj mudh Hkfo"; dh jkstxkj {kerk dk lcls vPNk Hkfo";oäk ekuk tkrk gSA ;s mijksä dkjd la;qä :i ls Nk=ksa ij Hkkjh ek=k esa ruko Mkyrs gSa vkSj 'kSf{kd fodkl esa ,d laHkkfor ckèkk cu tkrs gSaA ;|fi ;g euksoSKkfudksa] f'k{kkfonksa vkSj oSKkfudksa }kjk Lohdkj fd;k x;k Fkk fd vdknfed ruko Nk= ds thou dk fgLlk gS] vHkh Hkh gky ds fnuksa esa] vdknfed ruko dh ç"fr] vfHkO;fä vkSj çcaèku dks le<us ds fy, funZsf'kr 'kksèkksa us çeq[krk çkIr dh gSA c;y ¼1987½ us Ldwyksa esa lh[kus ij baVªkilZuy euksoSKkfud pj dh Hkwfedk ij vius vè;;u esa fn[kk;k Fkk fd Nk= ds thou esa rukoiw.kZ ifjfLFkfr;ksa ls [kjkc HkkoukRed lek;kstu gksrk gS] tks cnys esas vdknfed çn'kZu ij çfrdwy çHkko Mkyrk gSA mUgksaus ;g Hkh fn[kk;k fd rukoiw.kZ ifjfLFkfr;ksa esa laKkukRed {kerk ds vykok vU; varoZS;fäd pj vdknfed çn'kZu ds çeq[k çHkkod cu tkrs gSaA ruko dks vDlj LokLF;] LokLF; vkSj çn'kZu ds fy, gkfudkjd ds :i esa ns[kk tkrk gS] ysfdu fyu ,aM psu ¼2009½ ds vuqlkj] Nk=ksa ds chp ruko dks ges'kk udkjkRed :i ls ugha fy;k tkuk pkfg, D;ksafd ;g b"Vre çn'kZu ds fy, çeq[k çsjdksa esa ls ,d gSA vdknfed ruko ladsr nsrk gS vkSj Nk=ksa dks ;FkkFkZoknh [krjksa ¼ijh{kk½ ds f[kykQ j{kkRed dkjZokbZ ¼vdknfed rS;kjh½ djus ds fy, rS;kj djrk gSA ;g Nk=ksa dks vfrfjä ç;kl djus ds fy, çsfjr djrk gS tks vU;Fkk laHko ugha FkkA bl çdkj] ;fn 'kS{kf.kd ruko Nk=ksa ds lgu'khyrk ds Lrj ds Hkhrj gS] rks ;g f'k{kk ds lHkh fgrèkkjdksa ds fy, LoLFk gSA eè;e ruko Nk=ksa dks mPp vad çkIr djus ds fy, çsfjr djrk gS vkSj muesa jpukRedrk dks c>+kok nsrk gSA ysfdu] tc vdknfed ruko Nk=ksa ds lgu'khyrk ds Lrj vkSj lalkèkuksa dk eqdkcyk djus ls vfèkd gks tkrk gS] rks ruko vkSj bldh vfHkO;fä;k¡ tSls fpark] volkn vkSj tyu 'kS{kf.kd çfØ;k esa ckèkk mRiUu djrs gSaA
36 ;gk¡ 'kS{kf.kd ruko ds çfr Nk= dh èkkj.kk egRoiw.kZ gks tkrh gS D;ksafd tc ruko dks ,d pqukSrh ds :i esa ns[kk tkrk gS] rks ;g lh[kus dh {kerk esa o`f) ds lkFk {kerk dh Hkkouk ykrk gS(tcfd] tc [krjs ds :i esa ns[kk tkrk gS] rks ogh ruko ykpkjh vkSj uqdlku dh Hkkouk iSnk djrk gSA Nk=ksa dh fo'ks"krk,¡ vkSj O;ogkj iSVuZ egRo vkSj ruko ds çfr mudh laosnu'khyrk dks fuèkkZfjr djrs gSaA ,d gh 'kS{kf.kd ruko ls vuqHko dh xbZ ruko dk Lrj ,d Nk= ls nwljs esa] ,d d{kk ls nwljh d{kk esa] ,d Ldwy ls nwljs Ldwy esa vkSj ,d le; ls nwljs le; esa fHkUu gksrk gS] ysfdu] ;g vklkuh ls vuqeku yxk;k tk ldrk gS fd ijh{kk vofèk ds igys vkSj nkSjku vdknfed ruko dh vfèkdre rhozrk eglwl dh tkrh gSA Nk=ksa dks o"kZ ds vyx&vyx vuqekfur le; ij vfèkdre 'kS{kf.kd ruko dk lkeuk djuk iM+rk gS vkSj çHkq ¼2015½ ds vuqlkj] ruko dk lcls cM+k lzksr ijh{kkvksa esa Hkkx ysus vkSj vè;;u djus] vadksa ds fy, çfrLièkkZ vkSj cM+h ek=k esa 'kSf{kd lkexzh esa egkjr gkfly djus ds ifj.kke Lo:i gksrk gSA le; dh vofèkA ijh{kk dh rS;kjh ds fy, vkSj ijh{kk ds nkSjku ç'ui= fy[kus ds fy, vkoafVr le; dk vDlj Nk=ksa }kjk xyr vuqeku yxk;k tkrk gS vkSj bl lacaèk esa mfpr ijke'kZ ds vHkko esa 'kS{kf.kd okrkoj.k vfèkd rukoiw.kZ gks tkrk gSA ruko Nk=ksa ds O;fäxr vkSj lkekftd thou dks laLFkk ds Hkhrj vkSj ckgj nksuksa txg çHkkfor djrk gSA çHkkoh ruko çcaèku ds fy, çHkq ¼2015½ us çHkkoh le; çcaèku] lkekftd leFkZu] ldkjkRed iqueZwY;kadu vkSj vodk'k xfrfofèk;ksa esa layXu gksus dk lq<ko fn;kA 'kksèk ls irk pyk gS fd Nk=ksa }kjk muds fyax ds vkèkkj ij vdknfed ruko dks vyx rjg ls ekuk tkrk gS ¼ feJk ,V vy] 2000½A ,d gh ruko ds çfr çfrfØ;k Hkh fHkUu gksrh gS] D;ksafd Nk=k,¡ vfèkd vfHkO;atd gksrh gSa vkSj vDlj viuh Hkkoukvksa dks ckgj fudky nsrh gSa] tcfd iq#"k Nk= vDlj viuh Hkkoukvksa dks fu;af=r djrs gSa] leL;k dks Lohdkj djrs gSa vkSj leL;k dks lqy<kus ds ç;kl esa layXu gksrs gSaA ruko ls fuiVus dh 'kSyh Hkh fyax ds vkèkkj ij fHkUu gksrh gSA tc vdknfed ruko ds leku Lrjksa dk lkeuk djuk iM+rk gS] rks efgyk Nk= iq#"k Nk=ksa ¼gkbM ,aM lykaV] 1995½ dh rqyuk esa vfèkd ruko dk çn'kZu djrh gSaA leku Lrj ds vkbZD;w] ;ksX;rk vkSj lh[kus dh {kerk okys Nk=ksa ds chp 'kS{kf.kd ruko ds leku Lrj ij foHksnd çfrfØ;k ds ifj.kke Lo:i fyax ds vkèkkj ij 'kS{kf.kd çn'kZu esa

37 fHkUurk gksrh gSA 'kksèk ls irk pyk gS fd vdknfed ruko Nk=ksa dh lkekftd fLFkfr vkSj muds Ldwy ds LFkku ls lhèks tqM+k gqvk gSA leku Lrj dh laKkukRed vkSj ckSf)d {kerk okys Nk= lkekftd] foÙkh; vkSj vkoklh; fLFkfr esa varj ds dkj.k vyx&vyx çn'kZu djrs gSaA 'kgjh Nk=ksa ds ikl xzkeh.k Nk=ksa dh rqyuk esa vfèkd 'kS{kf.kd lalkèku tSls iqLrdky;] iqLrd LVky] dfj;j ijke'kZ dsaæ] vkèkqfud lapkj lqfoèkk,¡] mudh lgk;rk ds fy, csgrj f'k{kd vkfn mudh vklku igq¡p ds Hkhrj gSaA beSuq,y] ,Mkse vkSj lksykseu ¼2014½ }kjk fd, x, vè;;uksa us xzkeh.k {ks=ksa ds Ldwyksa dh rqyuk esa 'kgjh {ks=ksa ds Ldwyksa ds csgrj çn'kZu okys Ldwyksa ds bykds ds vkèkkj ij Nk=ksa ds 'kS{kf.kd çn'kZu ds Lrj esa egRoiw.kZ varj fn[kk;kA ifj;kr,V vy&2014 us fn[kk;k fd lkekftd fLFkfr] foÙkh; fLFkfr] 'kS{kf.kd ruko vkSj Nk=ksa ds 'kS{kf.kd çn'kZu ds chp ,d mPp lacaèk FkkA muds fu"d"kksZa us lq<ko fn;k fd ;fn Nk=ksa esa mPp 'kS{kf.kd ruko Fkk] rks os lkekftddj.k djus esa vleFkZ FksA ;fn Nk=ksa dks lkekftddj.k esa leL;k gksrh gS] rks mudk 'kS{kf.kd çn'kZu çHkkfor gksrk gSA fQj ls] muds uewus esa] Nk=] tks ikfjokfjd ifjfLFkfr;ksa ds dkj.k foÙkh; leL;kvksa dk lkeuk dj jgs Fks] muds 'kS{kf.kd çn'kZu esa Hkh fxjkoV vkbZ FkhA Nk=ksa esa volkn vkSj euksoSKkfud leL;kvksa ds fy, vdknfed ruko çeq[k ;ksxnkudrkZ gSA Nk=ksa ds chp vdknfed ruko ds lkFk volkn dk egRoiw.kZ lacaèk gS vkSj 'kekZ ¼2014½ us vius vè;;u esa ik;k fd mPp 'kS{kf.kd ruko okys fd'kksjksa ds lewg us de 'kS{kf.kd ruko okys fd'kksjksa ds lewg dh rqyuk esa vfèkd volkn çnf'kZr fd;kA ruko ls lacafèkr euksoSKkfud leL;k,¡ yacs le; ls MDVjksa] 'kksèkdrkZvksa vkSj f'k{kkfonksa dh #fp jgh gSa vkSj v#.k vkSj pOgk.k ¼2009½ us Ldwyh Nk=ksa ij vius 'kksèk ls ik;k fd muds }kjk vè;;u fd, x, vkèks Nk=ksa dks fdlh çdkj dh euksoSKkfud leL;k FkhA 'kS{kf.kd xfrfofèk;ksa ¼Nk=ksa ds :i esa mudh Hkwfedk½] muds 'kS{kf.kd çn'kZu ¼ijh{kkvksa esa vad½ ;k vè;;u ls lacafèkr vU; leL;kvksa ls lacafèkr euksoSKkfud leL;k,aA 'kS{kf.kd leL;kvksa vkSj ?kj esa vleFkZ okrkoj.k okys Nk=ksa us thou dks ,d cks< ds :i esa ns[kk vkSj muesa vkRegR;k ds fopkjksa dh nj vfèkd FkhA volkn vkSj euksoSKkfud leL;k,¡] tc ekStwn gksrh gSa] rks lh[kus ds ekgkSy esa ckèkk mRiUu djrh gSa vkSj vdknfed çn'kZu dks de djrh gSaA ruko dk tksf[ke Kku çkIr djus ds rjhds vkSj lh[kus dh çfØ;k esa Nk=ksa }kjk çkIr Kku dh ek=k dks cny ldrk gSA

38 gslsys ,V vy ¼2017½ds vuqlkj ' ruko tksf[ke vkSj ruko çfrfØ;k esa varj le<k tk ldrk gS fd leku Lrj ds Kku okys nks Nk=ksa ds ,d gh ekudh"r ijh{k.kksa ij vyx&vyx ifj.kke D;ksa gks ldrs gSa& ;k ,d Nk= igys LFkku ij leku Lrj dk Kku D;ksa tek ugha djrk gSA egRoiw.kZ fu.kZ; ysus ds fy, gkbZ&LVsd VsLV] tSls fd ,aM&vQ&dkslZ VsLV] dkslZ lyslesaV ijh{kk] gkbZ Ldwy ;ksX;rk ijh{kk vkSj dyst ços'k ijh{kk dk mi;ksx fd;k tkrk gSA tc vdknfed ruko ls lacafèkr vojksèkd lh[kus dh çfØ;k dks çHkkfor djrs gSa(f'k{k.k 'kSyh esa cnyko] 'kS{kf.kd lalkèkuksa esa o`f)] ifjokj vkSj lkfFk;ksa ls lg;ksx ;k çn'kZu esa lqèkkj ds fy, dksbZ vU; lh[kus dh lqfoèkk leL;k dks gy djus ds fy, vçHkkoh lkfcr gksxhA pw¡fd ruko tksf[ke dh ek=k Nk= vkcknh esa leku :i ls forfjr ugha gksrh gS] blfy, dksbZ Hkh fu.kZ; ysus ls igys Nk= ij ruko dh ek=k dh O;k[;k djuk egRoiw.kZ gSA 1-8 ifjHkk"kk fooj.k ij ,der dh deh vkSj ruko 'kCn ftl rjg ls fudyk gS] og fujk'kk] fpark] vkSj la?k"kZ tSls fopkjksa ds lkFk leku gks x;k gS] bldh detksjrk dks lfClMh nsrk gSA gkyk¡fd] okpk ds igyw Li"Vhdj.kksa vkSj ljy rkyesy esa çdV gksrs gSaA eSa ,d O;fäxr Hkkx ds :i esa ruko dk mPpkj.k d:¡xk ftlesa ,d lkFk voèkkj.kkRed vkSj laKkukRed rjhds 'kkfey gSa] ftUgsa O;fä ds i;kZoj.k ¼HkkSfrd vkSj lkekftd½ ds lkis{k le<uk pkfg,(;g vfuok;Z :i ls ,d udkjkRed vuqHko ugha gSAgkyk¡fd ,slk çrhr gksrk gS fd vR;fèkd O;fä bls vokafNr [kkstrs gSaA ;g euksoSKkfud vkSj 'kkjhfjd :i ls tkudkj gS vkSj fdlh O;fäRo] lkekftd i`"BHkwfe vkSj laL"fr ls l[rh ls tqM+k gqvk gSA O;fä vYikofèk esa dqN 'kkjhfjd çfr'kksèkksa ls cs[kcj gks ldrs gSa] mnkgj.k ds fy, U;wjksck;ksyftdy fofoèkrk, ¡] ysfdu euksoSKkfud çfr'kksèk [kqn dks fpark] [krjs] fpark vkSj Hk; ds ewM ds :i esa fpfàr djsaxsA lkekftd çfrfØ;k¡ Hkh gksaxh tks ,d O;fä ls nwljs O;fä esa fQj ls fHkUu gksaxhA ruko ds lkFk çcaèku djus dh mudh {kerk ds ckjs esa O;fä@O;fäxr dh jk; ruko dh vofèk vkSj xaHkhjrk vkSj blds 'kkjhfjd] euksoSKkfud vkSj O;ogkfjd vfHkO;fä;ksa ds :i esa ,d egRoiw.kZ eè;orÊ dkjd gSA eqdkcyk djus dk ys[kd dk fooj.k ruko eMy ds Kku esa lekfgr gksxkA ruko dk esjk viuk euksoSKkfud eMy dDl ¼1978½] yktj ¼1974½] vkSj lsYl ¼1970½ ds fopkjksa dks

39 nwljksa ds chp [khaprk gS] vkSj ruko dks 5 pj.k dh fofèk ds :i esa ekurk gS ftls eSa ;gk¡ ,d iy ds fy, mPpkj.k d:¡xk vkSj lkis{k :i ls tfVy d:¡xkA pj.k 1 ?kVuk@fLFkfr@ek¡x ;g ,d gS] tks laHkkfor ruko gS(pj.k 2 laHkkfor ruko ds O;fä@O;fäxr dk ewY;kadu gS(ewY;kadu ,sls ekeyksa ij cuk;k x;k gS tSls vklUu ruko] yksdkpkj] çR;k'kk] çsj.kk] vkRe&ewY; vkSj vkRe&vk"oklu ds ckjs esa igys tkx:drk vkSj Kku(;fn O;fä@O;fäxr laHkkfor ruko dks ,d okLrfod rukodrkZ ds :i esa ns[krk gS] rks og pj.k 3 esa la'kksèku djsxk ftlesa ruko ls fuiVus ds fy, O;fä@O;fäxr dh mudh {kerk dk nwljk ewY;kadu ;k ewY;kadu 'kkfey gS(;g nwljk ewY;kadu ,sls eqíksa ij LFkkfir fd;k tk,xk tSls O;fä@O;fäxr dh Kkr eqdkcyk djus dh {kerk vkSj mudh laHkkfor n{krk] vkSj D;k O;fä@O;fäxr laHkkfor ruko dks pqukSrh ;k [krjs ds :i esa ns[krk gSA nksuksa pqukSrh vkSj [krjs esa ewY;kadu lS)kafrd :i ls rukoiw.kZ vuqeku yxk;k tk ldrk gS] ysfdu eSa vuq'kalk djrk gw¡ fd og O;fä@O;fäxr tks ,d eqBHksM+ ds :i esa vkus okys ruko dk vkdyu djrk gS] laHkkfor ruko ds lkFk ldkjkRed çcaèku ls dqN vk'kkoknh miyfCèk dh igpku djsxk] tcfd [krjs ds ewY;kadu esa vfèkd fouk'kdkjh vkSj vifjgk;Z :i ls dksbZ iqjLdkj ysus dh laHkkouk ugha gSA pj.k 4 O;fäxr Lrj ij O;fä@O;fäxr ds çcaèku ds egRo vkSj çcaèku u djus ds egRo dks n'kkZrk gS] vkSj pj.k 5 ruko dk çfrdkj gS tks fd ,d ekewyh ls [krjs dh Hkkouk ls ysdj [kq'kh dh ,d vya"r voLFkk rd dBksjrk esa fofoèkrk yk ldrk gSA #dks] eSa rdZ nw¡xk fd ruko çfrfØ;k okLrfod :i ls 'kq: gksrh gS] gkyk¡fd gYds >ax ls] pj.k nks esa] ek¡x ds ewY;kadu dk dk;Z Lo;a [krjs ;k pqukSrh dh Hkkouk yk ldrk gS ftls ;k rks leklr dj fn;k tk,xk ;k vxys pj.k esa rst gks tk,xk] pj.k rhu esa] ;fn laHkkfor rukodrkZ ,d okLrfod rukodrkZ cu tkrk gS vkSj O;fä@O;fäxr viuh çcaèku djus dh {kerk ij lansg djrk gS] rks ruko dh Hkkouk c>+ tk,xhA ;fn O;fä@O;fäxr 'kkar O;fä ruko dks okLrfod :i esa igpkurk gS] ysfdu çcaèku djus dh viuh {kerk esa vkRefuHkZjrk j[krk gS] rks ruko dh Hkkouk fujarj cuh jg ldrh gS ;k vfèkd NksVh gks ldrh gS ;k xk;c Hkh gks ldrh gSA ;fn dksbZ okLrfod ruko dk nkok ugha fd;k tkrk gSA pj.k 4 esa O;fä@O;fäxr çcaèku u djus ds O;fäxr {k.kksa ij fopkj djsxkA pksdQqy LVªsl fjVVZ vafre pj.k gS tgk¡ O;fä@O;fäxr us laHkkfor ruko ds lkFk çcaèku djus ds fy, viuh ;ksX;rk dks gkfudkjd :i ls ekik gS ;k og okLrfod ds :i esa Li"V gS] tc O;fäxr egRo ¼euksoSKkfud] O;ogkfjd] ;k 'kkjhfjd½ çcaèku ugha dj jgs gSa mlds fy,

40 egRoiw.kZA ruko gYdk gks ldrk gS ;fn çcaèku u djus ds {k.k ml O;fä ds fy, dqN gn rd egRoghu fn[kkbZ nsrs gSa tgk¡ çcaèku u djus ds {k.k xaHkhj gksrs gSaA çcaèku dks ruko ds euksoSKkfud vkSj 'kkjhfjd ladsrksa dk mfpr :i ls lkeuk djus ds fy, O;fäxr „f"Vdks.kksa dks lqyHk cukus ds :i esa ns[kk tkrk gS rkfd O;fä@O;fäxr fu;fer :i ls fdlh Hkh deh ;k lkeuk djus ;k fQj ls djus dh ;ksX;rk j[kus okys tukns'k dks 'kkunkj >ax ls vkSj de dj ldsaA ifjfLFkfr;ksa dks ifjHkkf"kr djsa rkfd tkudkj gksus ds dkj.k ruko dh ek=k dks fudV ls Lohdkj fd;k tk lds ftlls çLrqfr esa ckèkk u vk,A çcaèku ugha djus dks O;fäxr lkèkuksa dh vko';drk ds :i esa ns[kk tkrk gS] ;k ruko ;k ekeyksa dh fLFkfr ds euksoSKkfud vkSj 'kkjhfjd ladsrksa dk lkeuk djus ds fy, mi;ksx djus ds fy, dksbZ „f"Vdks.k ¼;k vlQy j.kuhfr ;k vuqi;qä½ ugha gS] vkSj O;fä@O;fäxr tkx:d gS fd ;g ektjk gSaA ;fn O;fä@O;fäxr bl ckr ls voxr ugha gS fd ;g ekeyk gS] rks og Lo;a ds çcaèku ds fy, fuf'pr gksxk tc rd ;g Li"V gks tkrk gS fd os ugha gSaA çcaèku ugha ruko dk Kku gh gS tks ,d jksekapd :i esa dkQh ekewyh gks ldrk gS] ysfdu vius la;eh :i esa] Hk; vkSj O;kid fu;a=.k dk dkj.k cu ldrk gSA ruko dk ;g ewy:i lfUufgr gS vkSj ruko ds ysu&nsu ds eMy ls dbZ rjg ls mnkgj.k fn;k x;k gSA ;g dfFkr vkSj okLrfod ek¡x vkSj {kerk ds chp varj ugha djrk gS(;g laHkkfor ruko ds ckjs esa O;fä@O;fäxr dh jk; vkSj çcaèku ds fy, mudh ;ksX;rk ds ckjs esa mudh varnZ`f"V ds chp vlekurk ls ruko ds ifj.kkeksa dks ysrk gSA ;g laHkkfor rukoksa ds 3 çdkj ds laHkkfor ewY;kadu dk çLrko djrk gS] ftuesa ls 2 iw.kZ ruko çfr'kksèk ds fy, çeq[k gks ldrs gSa] vkSj eqBHksM+ vkSj tksf[ke nksuksa ds ckjs esa tkx:drk dks laHkkfor :i ls rukoiw.kZ ds :i esa igpkurs gSaA çcaèku u djus ds O;fäxr egRo fu.kkZ;d iw.kZ ruko çfr'kksèk esa vfèkd egRoiw.kZ gSa] vkSj çcaèku dks ifj.kke ds lkis{k ns[kk tkrk gS] tSlk fd yktj us lq<ko fn;k Fkk] ifj.kke dh Lok;ÙkrkA eMy vfèkd O;fä dsafær gS fd ;g vkus okys rukoksa ds fy, O;fä@O;fäxr çfr'kksèk dh vofèk vkSj rhozrk esa ,d lkj.kh dh vuqefr nsrk gS vkSj ;g lqfuf'pr djrk gS fd ;s le; ds lkFk vfuok;Z :i ls fujarj ugha gSaA eMy dks ' tk¡p ds ;ksX;' gksus dk vuqeku gS vkSj bldk mi;ksx bl tk¡p esa bLrseky fd, x, ruko ds dkedkt ds oxÊdj.k dh lykg

41 nsus ds fy, fd;k tkrk gSA ruko ds ' fu.kkZ;d fooj.k' dks dyec) djuk vlguh; gks ldrk gS vkSj bl fof'k"V tk¡p ds vfHk;ku ds fy, ;g vuko';d gSA ruko dk dksbZ Hkh fooj.k O;fä@O;fäxr Li"Vhdj.k ds laidZ esa gS vkSj ,d lkoZHkkSfed lR; ds vkèkkj ij ikyu djus esa NksVs ewY; dk gSA dsyh dk O;fäxr fuekZ.k fl)kar ¼1955½] ;g ns[kus ds fy, phtsa fd dSls O;fä @ O;fä vius ifjfprksa dh O;k[;k esa fHkUu gksrs gSa vkSj dSls os dk;Zokgh dh viuh vis{kk dks çLrqr djrs gq, dk;Z djrs gSaA ge esa ls çR;sd viuh O;fäxr fuekZ.k ç.kkyh ds p'es ds ekè;e ls gekjh fLFkfr dks ns[krk gSA - 1-9 fd'kksjkoLFkk esa ruko vkSj Ldwy dk ruko fd'kksjkoLFkk dh voèkkj.kk ij igys dqN ekSfyd fVIi.kh fd, fcuk ekè;fed fo|ky;ksa esa ruko dh ppkZ ij vkxs c>+uk vlaHko gksxk(vfèkd foLr`r ppkZ bl 'kksèk ds nk;js ls ckgj gS ysfdu ruko dh ppkZ ds fy, mi;qä gksus ij bls fQj ls lanfHkZr fd;k tk,xkA ' fd'kksjkoLFkk' 'kCn ySfVu Hkk"kk ds ' ,Mksylsjs ' ls vk;k gS] ftldk vFkZ gS ' ifjiDork^ dh vksj c>+uk]gkyk¡fd] mez ds ekeys esa bls ifjHkkf"kr djuk vklku ugha gSA fo"o çfl) euksoSKkfudksa vkSj f'k{kkfonksa us Nk=ksa dks f'k{kk dk dsaæ ekuk gS] ftlesa f'k{kd] Ldwy vkSj ekrk&firk muds ekufld] 'kkjhfjd vkSj HkkoukRed fodkl esa egRoiw.kZ Hkwfedk fuHkkrs gSaA oÙkZeku çfrLièkÊ lekt esa] fofHkUu dkjd cPpksa dks mPp Lrj dh 'kS{kf.kd miyfCèk gkfly djus esa egRoiw.kZ Hkwfedk fuHkkrs gSaA ekrk&firk vkSj Ldwy laLFkku vfèkdre miyfCèk gkfly djus ds fy, vFkd ç;kl djrs gSaA ysfdu ekrk&firk dh bl vis{kk dk cPpksa ij euksoSKkfud vkSj HkkoukRed :i ls cgqr udkjkRed çHkko iM+rk gSA Nk=ksa dh dM+h esgur ds ckotwn] os mPp Lrj dh 'kS{kf.kd miyfCèk gkfly djus esa l{ke ugha gSaA ,sls esa mUgsa rjg&rjg ds ruko dk lkeuk djuk iM+rk gSA fdlh jk"Vª dh çxfr mlds Nk=ksa dh çxfr ij fuHkZj djrh gSA Nk=ksa dh çxfr mudh 'kS{kf.kd miyfCèk ij vkèkkfjr gksrh gSA f'k{kk vk;ksx ¼1964&66½ }kjk ;g Hkh dgk x;k gS fd Hkkjr dk Hkfo"; mldh d{kk esa fufeZr gks jgk gSA ysfdu oÙkZeku esa ;g ns[kk tk jgk gS fd 'kS{kf.kd ruko ds dkj.k f'k{k.k laLFkkuksa esa Nk=ksa dh 'kS{kf.kd miyfCèk fnu&c&fnu çHkkfor gksrh tk jgh gSA 'kSf{kd lajpukvksa esa dfBukbZ] dfBu ikBîp;kZ dk fuekZ.k] Ldwy }kjk fn;k x;k vfrfjä dk;Z] mPp miyfCèk ds fy, ncko Mkyuk vkSj cPpksa ds ekufld vkSj 'kkjhfjd LokLF; Nk=
42 thou esa lcls egRoiw.kZ gS] ftldh çklafxdrk dks ns[krs gq, la;qä jk"Vª us lrr~ fodkl ds egRo dks ekU;rk nh gSA flracj 2015 esa] ekufld LokLF; dks y{; esa 'kkfey fd;k x;k Fkk fd'kksjkoLFkk esa] Nk= ekufld LokLF; ls lcls vfèkd çHkkfor gksrs gSaA ekufld LokLF; esa fxjkoV] vLoLFk çfrLièkkZ] 'kjkc vkSj u'khyh nokvksa ds vR;fèkd mi;ksx] vfu;fer fnup;kZ vkSj 'kSf{kd vkSj ekufld ruko vkfn ds dbZ dkj.k gSaA "kksèkdÙkkZ us vuqeku yxk;k fd Lukrd Lrj ds Nk=ksa dk 'kS{kf.kd ruko ekè;fed Lrj ds ruko ls rqyukRed :i ls de gSA vkt ds Nk=ksa esa vdknfed ruko muesa vkØked O;ogkj dh ço`fÙk dks c>+k jgk gSA ge vDlj lekpkj i=ksa ;k nwjn'kZu ds ekè;e ls ns[krs gSa fd Nk=ksa }kjk vkØked O;ogkj muds vkSj muds ekrk&firk ds fy, cgqr nnZukd gSA Nk= vkil esa yM+rs gSa] lM+dksa ij gaxkek djrs gSa vkSj dHkh&dHkh fdlh dks ekj Hkh nsrs gSaA ekufld ruko ds dkj.k Nk= lekt ls nwj jgus yxrs gSa vkSj muesa lkekftd laosnu'khyrk dk ºkzkl ns[kus dks feyrk gSA vkt ds Nk= lks'ky ehfM;k ij yk[kksa nksLrksa dks [kkstrs gSa] ysfdu vius iM+ksl esa jgus okys yksxksa ds ckjs esa ,d iy ds fy, Hkh ugha lksprsA vfèkdka'k yksxksa dks fMftVy nqfu;k okLrfod nqfu;k dh rqyuk esa vfèkd vkd"kZd yxrh gSA vkSj ;gh dkj.k gS fd muesa lkekftd laosnu'khyrk dk vHkko ik;k tkrk gSA ,d voèkkj.kk ds :i esa 'kSf{kd ruko mu Nk=ksa ls lacafèkr gS tks Ldwyksa esa i>+ jgs gSaA Ldwy] vU; laxBuksa dh rjg] ,d ,dh"r lkekftd bdkbZ gSa] tgk¡ dbZ O;fä ,d fuf'pr y{; dks çklr djus ds fy, feydj dke djrs gSaA f'k{kk dk eq[; mís'; Nk=ksa dk lokZaxh.k fodkl gS vkSj bls çklr djus ds fy, Ldwy lekt dh vU; bdkb;ksa ds lkFk ,d egRoiw.kZ Hkwfedk fuHkkrk gSA foKku] çkS|ksfxdh vkSj lwpuk dh çxfr ds dkj.k] Ldwy dh lajpuk yxkrkj cny jgh gSA Nk=ksa dh miyfCèk çsj.kk yxkrkj c>+ jgh gSA vyx&vyx dk;ksZa esa i>+us okys Nk=ksa dks vyx&vyx lzksrksa ls vkus okys ruko dk lkeuk djuk iM+ jgk gSA ruko ds lzksr vdknfed vkSj xSj&'kS{kf.kd nksuksa {ks=ksa esa QSys gq, gSaA 'kS{kf.kd dkjdksa esa Ldwy dh lajpuk] f'k{k.k&lh[kus dh çfØ;k] dk;ZHkkj vkfn 'kkfey gSa] tcfd xSj&'kS{kf.kd dkjdksa esa Lo;a] O;äRo y{k.k] ifjokj ds lnL;ksa ds lkFk lacaèk vkfn 'kkfey gSaA bu nksuksa çdkj ds dkjd Nk=ksa esa ruko dks tUe ns ldrs gSaA th- LVsuyh gy] fd'kksjkoLFkk ds fo"k; ij fopkj djus okys igys euksoSKkfudksa esa ls ,d Fks] vkSj mUgsa vDlj fd'kksj euksfoKku dk tud dgk tkrk gSA mudh iqLrd ' fd'kksjkoLFkk' igyh ckj 1904 esa çdkf'kr gqbZ Fkh(mudk lq<ko gS fd ;g ' thou dk pj.k' ckjg ls
43 iPphl o"kZ dh vk;q rd] ;kSou ls 'kq: gksdj vkSj ifjiDork ls o;Ldrk rd leklr gks ldrk gSA fd'kksjkoLFkk dh lksp vkSj le< fiNys dqN o"kksZa esa èkhjs&èkhjs cnyh gS(,d gh dkykuqØfed mez ds ;qokvksa dks ,d lkFk oxÊ"r djus dh vlaHkork dks vuqlaèkku esa ekU;rk nh xbZ gS ftlus cgqr vfèkd O;fäxr fHkUurk ds vfLrRo dk çn'kZu fd;k gSA fd'kksjkoLFkk dks vc ' thou ds pj.k' ds ctk; ' laØe.kdkyhu çfØ;k' ds :i esa vfèkd yksdfç; :i ls igpkuk tkrk gS(;g ,d ,slk le; gS ftlds nkSjku O;fä ,d voLFkk ls cpiu & nwljh voLFkk esa & ifjiDork dh vksj tkrk gS ¼dksyeSu vkSj gsaMªh 1990½A ijaijkxr :i ls] fd'kksjkoLFkk dks ' rwQku vkSj ruko' ls tksM+k x;k gS(ruko vkSj la?k"kZ] foæksg vkSj HkkoukRed vfLFkjrk }kjk fpfàr ,d leL;kxzLr vofèkA fd'kksjkoLFkk ds bu ikjaifjd] eq[; :i ls ,fjd ,fjdlu] vUuk Ýk;M vkSj ihVj Cyl tSls euksoSKkfudksa dks ftEesnkj Bgjk;k x;k gS] dks pqukSrh nh xbZ gS vkSj lHkh fo'ks"kK bl ckr ls lger ugha gksaxs fd fd'kksjkoLFkk O;fä ds fy, ,d leL;kxzLr vofèk gSA mnkgj.k ds fy,] vQ+j vkSj lcf'ku ¼1984½ dk nkok gS fd muds uewus esa ls dsoy 21 izfr"kr us gh v'kkar fd'kksjkoLFkk dk vuqHko fd;k(yxHkx 44 çfr'kr us viuh fd'kksjkoLFkk ds nkSjku vkRefo"okl eglwl djus vkSj dqN leL;kvksa dk vuqHko djus dh lwpuk nh] tcfd 35 izfr"kr us HkkoukRed vkSj ekufld ' mNky' dk vuqHko fd;kA gkyk¡fd] bls lkoZHkkSfed :i ls O;fäxr fodkl esa ' egRoiw.kZ vofèk' ds :i esa Lohdkj fd;k tk ldrk gS vkSj bl rjg] tks o;Ld fodkl ds fy, egRoiw.kZ çHkko Mky ldrk gSA ? Ldwy ls lacafèkr tk¡p lwph esa mPp Ldksfjax vkbVe 'kkfey gSa ? Ldwy dk 'kS{kf.kd i{k ? ijh{kk esa lQyrk dks ysdj vfHkHkkodksa dk ncko ? dkslZ ls uk[kq'k ? Ldwy ds dke dks ysdj fpark ? Ldwy ds vuq'kklukRed igyw ¼gkyk¡fd ;g Ldwy ds 'kS{kf.kd i{k ls lacafèkr enksa dh rqyuk esa de vke Fkk½ ? Ldwy neudkjh >w¡>uk

44 1-10 vè;;u dk egRo Ldwyh Nk=ksa esa ruko è;ku dsafær djus dh {kerk dks çHkkfor dj ldrk gS] vkSj ,sls vè;;u fd, x, gSa tks lkfcr djrs gSa fd ruko ,d Nk= dh è;ku dsafær djus dh {kerk esa gLr{ksi djrk gSA ;g le<us ds fy, fd vkjke djuk bruk egRoiw.kZ D;ksa gS vkSj ruko dks viuh ,dkxzrk vkSj viuh i>+kbZ dks çHkkfor u djus nsa] vkidks igys ruko vkSj ,dkxzrk ds chp ds lacaèk dks le<uk gksxkA dyst ds Nk=ksa esa ruko dksbZ ,slh pht ugha gS ftls ,d rjQ èkdsy dj gYds esa ysuk pkfg,A vius 'kSf{kd vuqHko dks vuqdwfyr djus vkSj vkidks vius 'kS{kf.kd y{;ksa rd igq¡pus dh vuqefr nsus ds fy, vius ruko ds Lrj dks de djus ds egRo dks iwjh rjg ls le<uk egRoiw.kZ gSA mPp f'k{kk esa ykSVus okys dbZ mPp ekè;fed Nk= vkerkSj ij 16&17 o"kÊ; u,&u, gkbZ Ldwy ds Nk= dh rqyuk esa vfèkd ruko esa gksrs gSaA o;Ld Nk=ksa dh c>+rh la[;k ds lkFk] dfj;j] ikfjokfjd ftEesnkfj;ksa] foÙkh; fparkvksa] vkSj vius cPpksa dh dyst f'k{kk ds fy, Hkqxrku djuk vkids thou esa gksus okys dbZ rukoksa esa ls dqN gks ldrs gSaA ;g le<uk egRoiw.kZ gS fd o`) Nk=ksa esa 'kS{kf.kd ruko thou ds vU; {ks=ksa tSls ikfjokfjd thou] ikyu&iks"k.k vkSj dke dks dSls çHkkfor dj ldrk gSA vdknfed ruko dks çHkkoh >ax ls çcafèkr djuk lh[kuk fpark dks dkQh de dj ldrk gS vkSj vkidks Ldwy] ifjokj vkSj dke dks larqfyr djus dh vuqefr nsrk gSA vdknfed ruko vkids thou dks dSls çHkkfor djrk gS 1- c>+k gqvk fpM+fpM+kiu 2- vlaxr uhan iSVuZ 3- Ldwy ;k dke ij è;ku dsafær djus esa vleFkZrk 4- Fkdku 5- Hkw[k u yxuk 6- fj'rksa ;k ikfjokfjd thou esa dyg 7- vyxko oÙkZeku esa ns[kk tk jgk gS fd fofHkUu çfr;ksxh ijh{kkvksa ds dkj.k nqfu;k Hkj ds fd'kksj rukoxzLr gks jgs gSaA mudh jpukRed {kerk çHkkoh gks jgh gSA ,d cgqr yksdfç; dgkor 45 gS] ' LoLF;'kjhj esa LoLFk fnekx dk okl gksrk gS' mu fd'kksjksa ds fy, viuk vFkZ vkSj egRo [kks pqdk gS tks flQZ thruk pkgrs gSa vkSj dsoy çfr;ksxh ijh{kkvksa esaA ekè;fed Lrj ds Nk=ksa ds fy,] ,slk yxrk gS fd lc dqN foLQksV djuk pkgrk gSA Hkkjr esa vkt dh bDdhloha lnh esa fd'kksjksa esa fdl gn rd volkn vkSj vkRe&gR;k,¡ 'kkfey gks xbZ gSa] bldk vanktk lks'ky ehfM;k] nwjn'kZu pSuyksa vkSj nSfud lekpkj i=ksa dh [kcjksa ls yxk;k tk ldrk gSA ;fn mu ifjfLFkfr;ksa ds dkj.kksa ij è;ku fn;k tk,] rks dbZ dkjd lkeus vkrs gSa] tSls fd xq.koÙkkiw.kZ laLFkkuksa esa ukekadu ds fy, vfèkdre vad çkIr djuk vfuok;Z gks tkrk gSA bl dkj.k fd'kksjksa ds ekrk&firk Hkh mu ij vLokLF;dj ncko Mkyus yxrs gSaA ftlls Nk= ruko vkSj volkn dk Hkh f'kdkj gks tkrs gSaA Nk=ksa ds ekufld LokLF; ij fofHkUu çdkj ds 'kSf{kd] lkekftd] ikfjokfjd vkSj euksoSKkfud çHkkoksa dh laosnu'khyrk dks eglwl djrs gq,] "kksèkdÙkkZ us 'kSf{kd ruko ds {ks= esa 'kksèk djds dqN rF; [kkstus dh bPNk tkx`r dh gSA 'kksèkkFkÊ us 'kksèk esa fo|kfFkZ;ksa ds ruko ls lacafèkr dqN varjkyksa ;k varjkyksa dks ns[kus ds ckn muds eu esa ,d egRoiw.kZ 'kksèk ç'u mBk] tks bl çdkj gS %& ekè;fed Lrj ds Nk= fdl Lrj ds ruko dk vuqHko dj jgs gSa\ D;k fyax] 'kS{kf.kd cksMZ vkSj ikfjokfjd i`"BHkwfe ekè;

100%	MATCHING BLOCK 15/145	SA	SANDEEP SIR HINDI VERSION.pdf (D143525322)

fed fo|ky; ds Nk=ksa ds 'kS{kf.kd

ruko dks çHkkfor djrh gS\ vr% 'kksèkkFkÊ us bl {ks= esa vuqlaèkku ds egRo rFkk mijksä 'kksèk ç'uksa ds mÙkj dh vko';drk dks le<dj fuEufyf[kr 'kksèk leL;k dk p;u fd;k gSA 1-11 vuqlaèkku leL;k ;g "kks/k izca/k Þ<kj[kaM jkT; ds lFakky ijxuk izeaMy ds vUrxZr xksìk ftyk ds ek/;fed Lrj ds fo|kfFkZ;kas es a"kSf{kd ruko dk fo"ys'k.kkRed v/;;uÞ fo"k; ij vk;ksftr fd;k tkrk gSA bl 'kksèk esa dgk x;k gS fd ekè;fed Lrj ds Nk=ksa ij 'kS{kf.kd ruko ij ekè;fed Lrj ds Nk=ksa esa os Nk= 'kkfey gSa tks d{kk 9 oha ls 10 oha rd ds gSa A cPps lekt dk ,d çeq[k ?kVd gksrs gSa vkSj mUgsa fdlh Hkh jk"Vª dh okLrfod laifÙk ekuk tkrk gSA ,d oSf"od lgefr gS fd fdlh Hkh jk"Vª dh o`f)] le`f) vkSj fodkl cPpksa ds ikyu&iks"k.k ij fuHkZj djrk gSA cPpksa dk dY;k.k fdlh Hkh lekt dh çeq[k ftEesnkjh gksrh gS vkSj lHkh jk"Vªksa }kjk muds dY;k.k ds fy, dbZ cM+s QSlys fy, tkrs gSaA fd'kksjkoLFkk thou dh lcls detksj vofèk gksrh gS D;ksafd bl vofèk esa lHkh ekuoh; y{k.k vkdkj ysrs gSa tks O;fä;ksa ds fy, vkthou cuk jgrk gSA O;oLFkk }kjk fd'kksjksa ij yxk, x, ruko vkSj ncko ds dkj.k bl Lrj ij dbZ ekufld LokLF; leL;k,¡ Hkh

46 fodflr gks tkrh gSaA varjkZ"Vªh; leqnk;ksa us bu c>+rh ek¡xksa dks ekU;rk nh gS vkSj lEesyuksa] lalkèku vkoaVu vkSj çfrcaèkksa ds ekè;e ls bl eqís dks xaHkhj fpark ds lkFk lacksfèkr fd;k gSA f'k{kk dh xq.koÙkk eu] 'kjhj vkSj vkRek ds lexz fodkl ds ekè;e ls ifjyf{kr gksrh gSA f'k{kk thou ds nkSjku O;fä;ksa }kjk ,d= fd, x, lHkh vuqHkoksa dks lekfgr djrh gS vkSj ;g ekuo O;ogkj dk lanHkZ fcanq cu tkrh gSA xq.kkRed :i ls le`) vuqHko ftEesnkjh dh c>+rh Hkkouk vkSj csgrj ekuoh; xq.kksa ds lkFk&lkFk uSfrdrk dh o`f) dh vksj ys tkrs gSaA lekt us fofHkUu ikBîp;kZ vkSj lg&ikB~;Øexfrfofèk;ksa ds ekè;e ls ;qok vkcknh dh 'kSf{kd vko';drkvksa dks iwjk djus ds fy, Ldwyksa] dystksa vkSj fo"ofo|ky;ksa ls ;qä vkSipkfjd f'k{kk ç.kkyh dks lkSaik gSA rF;ksa vkSj vka¡dM+ksa ds ,d laf{kIr fo'ys"k.k ls irk pyrk gS fd de fodflr ns'kksa dh rqyuk esa oÙkZeku le; ds fodflr ns'kksa esa fiNyh nks 'krkfCn;ksa esa vfèkd fodflr f'k{kk ç.kkyh FkhA f'k{kk lkekftd] jktuhfrd vkSj vkfFkZd l'kfädj.k ds fy, ftEesnkj çkFkfed dkjd gSA Ldwy ,d ,slk LFkku gS tgk¡ cPps vius thou dk egRoiw.kZ le; O;rhr djrs gSa vkSj tgk¡ vkus okyh ih>+h dks ns'k ds laHkkfor ukxfjd cuus ds fy, vkdkj fn;k tkrk gSA lekt vkSj ns'k ds fy, ;g egRoiw.kZ gS fd Nk= vko';d Kku vkSj dkS'ky lh[ksa @ çkIr djsa tks mUgsa jk"Vª ds fodkl esa ldkjkRed ;ksxnku nsus esa l{ke cuk,A f'k{kk dh çpfyr ç.kkyh ds vuqlkj] Nk=ksa ds dfj;j dks Hkh muds çn'kZu ds vkèkkj ij Ldwyksa esa rS;kj fd;k tkrk gS] fo'ks"k :i ls 'kS{kf.kd çn'kZu ijh{kkvksa esa çkIr vadksa }kjk n'kkZ;k tkrk gSA vad i= gh ,dek= miyCèk ladsrd gS] tks Nk=ksa dh n{krk vkSj çHkko'khyrk dks ekirk gS ysfdu iwjs o"kZ d{kkvksa esa muds çn'kZu dks flLVe }kjk vuns[kk dj fn;k tkrk gSA Nk=ksa ds fy, vdknfed çn'kZu vkSj Hkh egRoiw.kZ gks tkrs gSa D;ksafd 'kSf{kd ç.kkyh dk inkuqØe bl ij vkèkkfjr gksrk gSvFkkZr~~ csgrj çn'kZu] csgrj dfj;j] ukSdjh vkSj csgrj thou Lrj pquus ds volj mrus gh vfèkd gksrs gSaA vdknfed çn'kZu Hkh egRoiw.kZ gS D;ksafd ;g muds ifjokjksa vkSj lekt esa Nk=ksa dh fLFkfr dks c>+krk gS D;ksafd ;g oÙkZeku 'kSf{kd lsfVaXl esa ,d Nk= dh cqf)] n{krk vkSj jkstxkj dk ,dek= ladsrd gSA Hkkjr esa f'k{kk f'k{kd dsafær vkSj ijh{kk dsafær gSA

47 ;g f'k{kk ds çfr ,d ikjaifjd „f"Vdks.k gSA f'k{kk dh bl ç.kkyh ds ifj.kkeLo:i] Hkkjr esa Nk= ijh{kkvksa esa mPp vad çkIr djus ds fy, viuh iwjh dksf'k'k djrs gSa] ysfdu blls 'kS{kf.kd l= ds nkSjku dke dk cks< vkSj ruko c>+ tkrk gSA ijh{kk dh vofèk ds nkSjku Nk=ksa ij ;g ncko lcls vfèkd gksrk gS vkSj mUgsa flLVe dk fgLlk gksus ds dkj.k bls lgu djuk iM+rk gSA bl çdkj] vdknfed ruko dks Nk= thou dk ,d vfHkUu vkSj vfoHkkT; fgLlk ekuk tkrk gSA f'k{kk ds cks< dks de djus vkSj Nk=ksa ij 'kS{kf.kd ruko ds Lrj dks de djus ds fy, le;≤ ij fofHkUu dkuwuksa vkSj uhfrxr flQkfj'kksa ds ekè;e ls f'k{kk ç.kkyh esa dbZ lqèkkj yk, x, gSaA xSj&ijh{kk&mUeq[k d{kkvksa ¼tSls [ksy] laxhr] rSjkdh bR;kfn½ esa o`f)] x`gdk;Z dh ek=k esa deh] vdknfed xzsfMax }kjk fo"k;&okj vadu ds çfrLFkkiu vkfn tSlh dbZ uohu j.kuhfr;k¡ fodflr ns'kksa }kjk Nk=ksa dh la[;k dks de djus ds fy, viukbZ tkrh gSaA ruko ysfdu Hkkjr esa vkt rd f'k{kd&dsafær@ijh{kk&dsafær uhfr esa cnyko ,d nwj ds lius tSlk yxrk gSA thou ds fdlh Hkh {ks= esa Nk=ksa dh vis{kk,¡ muds O;fäRo vkSj i`"BHkwfe ds vkèkkj ij fHkUu gksrh gSaA Nk=ksa dk vius çfr „f"Vdks.k] vius ifjos'k vkSj mudh dfFkr vkn'kZ ifjfLFkfr;k¡ i;kZoj.k ds lkFk çR;sd ckrphr esa muds dk;ksZa ¼fuf"Ø;rk½ dks fuèkkZfjr djrh gSaA Nk=ksa dh bu vis{kkvksa vkSj „f"Vdks.kksa dks lkekftd

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f'k{kk ds ekè;e ls vkdkj fn;k tkrk gS]

ftlls Nk= dqN fuf'pr ?kVukvksa dks HkkX; ;k vU; 'kfä'kkyh yksxksa ds dk;ksZa ds ifj.kkeLo:i Lohdkj djuk lh[krs gSa tks muds fu;a=.k ls ckgj gSa(vkSj dqN fuf'pr ?kVuk,¡] tks mudh ifjorZu'khy igq¡p ds Hkhrj gksa vkSj os viuh {kerk] dkS'ky ;k dM+h esgur dk mi;ksx djds ifj.kkeksa dks çHkkfor dj ldrs gSaA 1-12 ekè;fed Lrj ds Nk= dh ifjHkk"kk ekè;fed f'k{kk d{kk 9 esa 'kq: gksrh gS vkSj d{kk 12 rd pyrh gSA ekè;fed Lrj dks nks] nks lky ds pØksa esa foHkkftr fd;k tkrk gS] ftls vke rkSj ij lkekU;@fuEu ekè;fed fo|ky;] ;k ' ekud' vkSj mPp@ofj"B ekè;fed fo|ky;] ;k ' ekud' ds :i esa tkuk tkrk gSAljdkjh Ldwyksa esa f'k{kk vHkh Hkh eq¶r gS] gkyk¡fd ekè;fed Lrj ij futh f'k{kk vfèkd vke gSA

48 lkoZtfud ijh{kk,¡ nksuksa pØksa ds var esa vk;ksftr dh tkrh gSa vkSj Øe'k% xzsM 11 vkSj xzsM 12fo"ofo|ky; Lrj ds vè;;u rd igq¡p çnku djrh gSaA Hkkjr esa fuEu ekè;fed fo|ky; ds lkekU; ikBîØe esa rhu Hkk"kk¡ ¼ks=h; Hkk"kk] ,d oSdfYid vkSj vaxzsth Hkk"kk lfgr½] xf.kr] foKku vkSj çkS|ksfxdh] lkekftd foKku] dk;Z@iwoZ&O;kolkf;d f'k{kk] dyk vkSj 'kkjhfjd f'k{kk 'kkfey gSaA ekè;fed fo|ky; dsaæh; ;k jkT; cksMksZa ls laca/k gksrs gSa] tks d{kk 10 ds var esa ekè;fed fo|ky; çek.ki= çnku djrs gSaA ekè;fed fo|ky; ds igys nks o"kksZa esa çn'kZu vkSj ,l,lh ds ifj.kkeksa ds vkèkkj ij] Nk= ofj"B @ mPp ekè;fed fo|ky; esa ços'k dj ldrs gSaA mPp ekè;fed fo|ky; Nk=ksa dks foKku] okf.kT; vkSj dyk @ ekufodh dh is'kd'k djrs gq, ,d èkkjk ;k vè;;u dh ,dkxzrk dk p;u djus dk volj çnku djrk gSA 1-13 vè;;u dk mís'; ? ek/;fed Lrj ds fo|kfFkZ;kas ds "kSf{kd ruko dk fyax] "kSf{kd cksMZ rFkk vkoklh; i`'BHkweh ds lkis{k rqyukRed v/;;u djukA ? "kS{kf.kd ruko fofHkUu vk;keksa ds lkis{k nks f"k{kk cksMZ ds ek/;fed Lrjh; fo|kfFkZ;ksa dk rqyuk djukA ? "kSf{kd ruko ds fofHkUu vk;keksa ds lkis{k nks f"k{kk cksMZ ds ek/;fed Lrjh; xzkeh.k i`'BHkwfe ds fo|kfFkZ;ksa dk rqyukred v/;;u djukA ? "kSf{kd ruko ds fofHkUu vk;keksa ds lkis{k nks f"k{kk cksMZ ds ek/;fed Lrjh; "kgjh i`'BHkweh ds fo|kfFkZ;ksaadk rqyukRed v/;;u djukA ? "kSf{kd ruko ds fofHkUUk vk;keksads lkis{k nks f"k{kk cksMZ ds ek/;fed Lrjh; iq#'k fo|kfFkZ;kas ,oa efgyk fo|kfFkZ;kas ds chp rqyukRed v/;;u djukA 1-14 v/;;u dh ifjdYiuk,¡ ? ekè;fed Lrj ds fo|kfFkZ;kas ds chp 'kS{kf.kd ruko vkSj miyfCèk çsj.kk ds chp dksbZ egRoiw.kZ lacaèk ugha gSA ? nks f'k{kk cksMksZa ds ekè;fed Lrj ds

59%	MATCHING BLOCK 17/145	SA	SANDEEP SIR HINDI VERSION.pdf (D143525322)

Nk=ksa ds chp 'kS{kf.kd ruko vkSj v/;;u vknrksa ds chp dksbZ egRoiw.kZ laca/k ugha gSA 49 ? “

kSf{kd ruko ds fofHkUu vk;keksa ds lkis{k nks f”k{kk cksMsaZ ds ek/;fed Lrjh; xzkeh.k i`’BHkwfe ds fo|kfFkZ;ksaads chp egRoiw.kZ varj ugha gSA ? “kSf{kd ruko ds fofHkUu vk;keksa ds lkis{k nks f”k{kk cksMsaZ ds ek/;fed Lrjh; “kgjh i`’BHkweh ds fo|kfFkZ;ksa ds chp egRoiw.kZ varj ugha gSA ? “kSf{kd ruko ds fofHkUu vk;keksa ds lkis{k nks f”k{kk cksMsaZ ds ek/;fed Lrjh; iq#’k fo|kfFkZ;kas ,oa efgyk fo|kfFkZ;kas ds chp egRoiw.kZ varj ugha gSaA ? tsbZch cksMZ vkSj lhch,lbZ cksMZ ds lHkh

50%	MATCHING BLOCK 18/145	SA	SANDEEP SIR HINDI VERSION.pdf (D143525322)

Nk=ksa ds chp 'kS{kf.kd ruko vkSj vè;;u dh vknr ds chp dksbZ egRoiw.kZ lacaèk ugha gSA ?

lhch,lbZ vkSj tsbZch cksMZ ds lHkh Nk=ksa ds chp miyfCèk çsj.kk vkSj vè;;u dh vknr ds chp dksbZ egRoiw.kZ lacaèk ugha gSA
50 v/;k;&2 lkfgR; dh leh{kk lkfgR; leh{kk ,d fof'k"V fo"k; ;k 'kksèk ç'u ls lacafèkr fo}kuksa ds lzksrksa ¼tSls fdrkcsa] tuZy ys[k vkSj Fkhfll½ dk ,d loZs{k.k gSA ekStwnk Kku ds lacaèk esa vkids dke dks O;ofLFkr djus ds fy, bls vDlj ,d Fkhfll] 'kksèk çcaèk ;k 'kksèk i= ds fgLls ds :i esa fy[kk tkrk gSA ,d lkfgR; leh{kk ,d fo'ks"k fo"k; {ks= esa çdkf'kr tkudkjh ij ppkZ djrh gS] vkSj dHkh&dHkh ,d fuf'pr le; vofèk ds Hkhrj fdlh fo'ks"k fo"k; {ks= esa tkudkjh ij ppkZ djrh gSA ,d lkfgR; leh{kk dsoy lzksrksa dk ,d ljy lkjka'k gks ldrk gS] ysfdu blesa vkerkSj ij ,d laxBukRed iSVuZ gksrk gS vkSj lkjka'k vkSj la'ys"k.k nksuksa dks tksM+rk gSA ,d lkjka'k lzksr dh egRoiw.kZ tkudkjh dk ,d laf{kIr fooj.k gS] ysfdu ,d la'ys"k.k ml tkudkjh dk ,d iqu% laxBu] ;k Qsjcny gSA ;g iqjkuh lkexzh dh ubZ O;k[;k ns ldrk gS ;k iqjkuh O;k[;kvksa ds lkFk u, dks tksM+ ldrk gSA ;k ;g çeq[k cglksa lfgr {ks= dh ckSf)d çxfr dk irk yxk ldrk gSA vkSj fLFkfr ds vkèkkj ij] lkfgR; leh{kk lzksrksa dk ewY;kadu dj ldrh gS vkSj ikBd dks lcls çklafxd ;k çklafxd lykg ns ldrh gSaA lacaf/kr lkfgR; dh leh{kk dk rkRi;Z gS] izLrqr “kks/k ls lacafa/kr lkfgR;A blds}kjk fd, x, “kks/k dk;Z dk irk pyrk gS] lkFk gh leL;k ds lek/kku ds fy, iz;ksx iwoZ dh fof/k;ksa rFkk midj.kksa dk irk py tkrk gSA jsìh ,V vy ¼2018½ us vius vè;;u esa fu"d"kZ fudkyk gS fd Nk=ksa ds ruko esa èkkjk&okj varj ekStwn gSA O;fäxr] lkekftd vkSj laLFkkxr Lrj ij ruko ls fuiVuk egRoiw.kZ gSA çfrfØ;k] ;ksx] thou dkS'ky çf'k{k.k] fnekxhiu] è;ku vkSj euksfpfdRlk tSls mipkj ruko ls fuiVus ds fy, mi;ksxh ik, x, gSaA ruko ds eq[; dkj.k dh igpku djuk blls fuiVus dh dqath gSA is'ksoj ruko ls fuiVus ds fy, fo'ks"k j.kuhfr fodflr dj ldrs gSaA Nk=ksa dh ,dh"r HkykbZ u dsoy O;fä ds fy, cfYd laLFkku ds fy, Hkh egRoiw.kZ gSA fnfe=kso ¼2017½ us vius vè;;u esa nkok fd;k fd ruko dks ;g lqfuf'pr djds lacksfèkr fd;k tk ldrk gS fd Nk= vius dY;k.k dks vR;fèkd egRo nsaA Hkkstu] O;k;ke] dke]
51 euksjatu dqN ,sls {ks= gSa ftu ij è;ku fn;k tkuk pkfg,A mUgksaus ;g Hkh fu"d"kZ fudkyk fd f'k{kk ç.kkyh vdknfed ;ksX;rk ds lkFk vfèkd gS vkSj Nk=ksa ds lexz fodkl esa i;kZIr ;ksxnku ugha nsrh gSA Nk=ksa dks vkerkSj ij bl rjg ls okrkuqdwfyr fd;k tkrk gS fd os vkxkeh pqukSfr;ksa dk lkeuk djus ds fy, Hk;Hkhr gks tkrs gSa D;ksafd è;ku dsoy f'k{kkfonksa ij gksrk gS u fd ekufld :i ls fodkl ij f'k{kk ds ekè;e ds fy, dbZ fodYi gSaA miyCèk ,dek= fodYi vaxzsth gksus ds dkj.k xzkeh.k i`"BHkwfe ds Nk=ksa ds fy, ckèkk cu ldrh gSA ,sls dksbZ ikBîØe miyCèk ugha gSa] tks jkstxkj dsafær gksaA u, Lukrdksa dks csgrj lyslesaV ds fy, vfèkd lapkj dkS'ky fodkl dh vko';drk gSA lqczef.k vkSj dkèkhjou ¼2017½ us Nk=ksa ds chp 'kS{kf.kd ruko vkSj ekufld LokLF; ds chp lacaèk dk [kqyklk fd;kA mUgksaus bl ckr dk leFkZu fd;k fd 'kS{kf.kd ruko vkSj ekufld LokLF; lg&laca/k gSa vkSj Nk= 'kS{kf.kd lajpuk ls rax gSaA ekrk&firk vkSj Ldwy mPp xzsM ds fy, Nk=ksa ij cgqr vfèkd ncko Mkyrs gSa tks Nk=ksa dks fujk'k djrs gSa] vkxs ;g tksM+us ds fy, fd ekxZn'kZu ds ekeys esa ekrk&firk vkSj Ldwy ls i;kZIr leFkZu ugha feyrk gSA vdknfed eapksa ij jpukRed çn'kZu djus ij Nk= ekufld :i ls LoLFk gksrs gSaA mUgksaus ;g Hkh çfrikfnr fd;k fd

78%	MATCHING BLOCK 22/145	SA	PhD thesis monoj das.docx (D144733372)

futh Ldwyksa ds Nk=ksa ij ljdkjh Ldwyksa ds Nk=ksa dh rqyuk esa

vfèkd gkseodZ vkSj vU; 'kS{kf.kd lacafèkr vlkbuesaV ds dkj.k vfèkd ncko Mkyk tkrk gSA futh vkSj ljdkjh Ldwyksa ds Nk=ksa ds ekufld LokLF; esa egRoiw.kZ varj ik;k x;kA mUgksaus tksj nsdj dgk fd xjhc lkekftd vkfFkZd i`"BHkwfe vkSj tksf[ke dh deh okys ljdkjh Ldwy ds Nk=ksa dh rqyuk esa futh Ldwyksa ds Nk=ksa dk vyx iks"k.k vkSj O;kid vuqHko gksrk gSA ;g ruko c>+us dk ,d dkj.k gSA flag ch0 ds0 ,oa flag ts0 ¼2017½ }kjk " fd"kksjkoLFkk ds fo|kfFkZ;kas esa "kSf{kd ruko ij vfHkHkkod] vfHkizsj.kk dk iM+us okys izHkko dk v/;;u" fo'k; ij "kks/kdk;Z fd;kA bl v/;;u esa "kks/kdÙkkZ us U;kn"kZ ds #i esa80 f"k{kd ,oa 80 vfHkHkkod ds lkFk dqy 800 Nk=@Nk=kvksadk p;u fd;kA vuqla/kku ds ifj.kkeksals izkIr fu'd'kZ ds vk/kkj ij ;g Kkr gqvk fd v/;;ujr fd"kksjkoLFkk ds fo|kfFkZ;kas esavfHkHkkod vfHkiszj.kk dk iM+us okys izHkko dk lh/kk laca/k gS] vkSj Nk= o Nk=kvkas esa "kSf{kd ruko ij vfHkHkkod vfHkizsj.kk dk iM+us okys izHkko esa dksbZ lkFkZd varj ugha gSA 'kekZ ,V vy ¼2016½ us vius vè;;u esa ruko ij vadq'k yxkus ds fy, fofHkUu rjhdksa ds bLrseky dks crk;kA jkstkuk ,d 'kkjhfjd O;k;ke djus ls ruko dh fpark nwj gks ldrh
52 gSA dksbZ Hkh fofHkUu le; çcaèku midj.kksa dks viuk ldrk gS vkSj vodk'k xfrfofèk;ksa esa 'kkfey gks ldrk gS ftlls Nk=ksa dks ykHk gks ldrk gSA lkFk gh] ;g Hkh lq<ko fn;k x;k fd ruko dks de djus ds fy, dystksa esa ,d vuqdwy ekgkSy gksuk pkfg,A f'k{kdksa dh vksj ls fMyhojh dh 'kSyh esa cnyko vkSj esaVj çnku djus ls f'k{k.k 'kSyh esa rkth gok vk ldrh gSA çHkq ¼2015½ us mPprj ekè;fed Nk=ksa ij 'kksèk fd;k vkSj ;g fu"d"kZ fudkyk fd iq#"k Nk= efgyk Nk=ksa dh rqyuk esa vfèkd rukoxzLr gksrs gSaA '

77%	MATCHING BLOCK 21/145	SA	Suchna Sampreshan Takniki ke Pariprekshya mein ... (D125237457)

kgjh Nk=ksa dk 'kS{kf.kd ruko xzkeh.k Nk=ksa dh rqyuk esa vfèkd gksrk gSA ljdkjh Ldwy

ds Nk= dk ruko futh Ldwy ds Nk= ds ruko ls de gksrk gSA lkbal LVªhe ds LVwMsaV~l vkV~lZ ds LVwMsaV~l ls T;knk LVªsl esa jgrs gSaA nsc ,V vy ¼2014½] dksydkrk ds ik¡p futh ekè;fed fo|ky;ksa ds 400 iq#"k Nk=ksa ij vè;;u fd;k] tks d{kk 10 vkSj 12 esa i>+ jgs FksA 35 çfr'kr Nk=ksa esa mPp 'kS{kf.kd ruko ik;k x;k vkSj 37 çfr'kr esa mPp fpark dk Lrj ik;k x;kA dgk tkrk gS fd lhekar xzsM okys Nk=ksa esa csgrj xzsM okys Nk=ksa dh rqyuk esa ruko dk Lrj vfèkd gksrk gSA lkFk gh] ikBîsrj xfrfofèk;ksa esa 'kkfey Nk=ksa dks mu Nk=ksa ls lacafèkr gksus ds dkj.k vfèkd rukoxzLr ik;k x;k tks blesa 'kkfey ugha FksA dkSj ¼2014½ us Lohdkj fd;k fd 'kS{kf.kd ruko ds dkj.k fd'kksjksa dk ekufld LokLF; çHkkfor gksrk gSA yM+dksa dh rqyuk esa 'kS{kf.kd ruko okyh yM+fd;ksa dk ekufld LokLF; [kjkc ik;k x;kA vè;;u esa ;g ik;k x;k fd ekrk&firk dbZ ckj Nk=ksa ij ncko vkSj ncko Mkyrs gSa ftlls ekufld LokLF; fcxM+ tkrk gSA rksej] ch0 ,oa dkyjk vkj0 ds0 ¼2014½ }kjk leosf"kr fo|ky; dk;Zdze dk fo"ks'k vko";drk okys fo|kfFkZ;ksadh "kSf{kd miyfC/k rFkk lek;kstu ij izHkko dk v/;;u fo'k; ij "kks/kdk;Z fd;k x;kA bl v?;;u esa "kks/kdÙkkZvksaus U;kn"kZ ds #i esaljdkjh mPp izkFkfed fo|ky;ksads 15 lkekU;] 15 n`f'V ckf/kr] 15 Jo.kckf/kr fo|kfFkZ;ksadk p;u fd;kA "kks/kdÙkkZvksa us ;g fu'd'kZ fudkyk fd Jo.kckf/kr fo|kfFkZ;ksadh "kSf{kd miyfC/k dk vkSlr Lrj n`f'V ckf/kr fo|kfFkZ;kas lsvf/kd gS] tcfd Jo.k ckf/kr fo|kfFkZ;kas dk "kSf{kd lek;kstu vkSlr Lrj dk rFkk n`f'V ckf/kr fo|kfFkZ;ksa dk "kSf{kd lek;kstu vlarks'ktud gSa ¼tSlk fd m)r gSa] "kks/k xaxks=h] bufQfYcusV-,lh-bu esa½A
53 cVSusg ¼2013½ us vius vè;;u esa fo"ofo|ky; esa Nk=ksa }kjk vuqHko fd, x, 'kS{kf.kd rukoksa dks ekikA fo'ys"k.kksa ds ifj.kke ls irk pyk fd ,d vuqfpr 'kS{kf.kd vfèkHkkj gS] foLr`r ikBîØe lkexzh dks doj djus ds dkj.k vè;;u ds fy, i;kZIr le; ugha gS] mPp ikfjokfjd vis{kk,¡ vkSj fuEu çsj.kk Lrj ruko ds dqN dkj.k gSaA vlQyrk dk Mj Hkh ruko dk çeq[k dkj.k gSA fofHkUu fo'ks"kKrkvksa ls
Nk=ksa

100%	MATCHING BLOCK 19/145	SA	Anamika Tiwari Thesis.pdf (D144837136)

ds chp dksbZ egRoiw.kZ varj ugha ik;k x;kA [

kku vkSj dkSlj ¼2013½ us fu"d"kZ fudkyk fd ruko fuf'pr :i ls vdknfed çn'kZu dks udkjkRed rjhds ls çHkkfor djrk gS] gkyk¡fd fyax ds vuqlkj dksbZ egRoiw.kZ varj ugha ik;k x;kA twfu;j vkSj lhfu;j Nk=ksa ds chp varj Li"V FkkA ruko] fuf'pr :i ls] dq'kyrkiwoZd vè;;u djus vkSj le; ds çcaèku dh {kerk dks çHkkfor djrk gSA fu;fer :i ls vè;;u djuk egRoiw.kZ gS] ;g vdknfed ncko dks de djus esa enn djrk gS vkSj mUgsa vius y{;ksa dks iwjk djus esa enn djrk gSA euksgjyky ¼2013½ us ek/;fed Lrj ds vkoklh; ,oaxSj vkoklh; fo|kfFkZ;kas ds "kSf{kd ruko ,oa O;fDrRo izfrekuksadk rqyukRed v/;;u fd;kA mUgksaus vius v/;;u esa ;g ik;k fd "kSf{kd ruko ,oa O;fDrRo izfrekuksa esa varj ns[kus dks feyrk gSaA xSj vkoklh; yM+fd;k¡sa@ yM+dksa fd rqyuk esa vkoklh; yM+fd;k¡¡@ yM+ds "kSf{kd ruko dk vf/kd lkeuk djrs gSaA vf/kxe esa vleFkZ Nk= fy[kus] i>+us] cksyus] xf.krh; {kerkvksa ,oa rkfdZdrk lEca/kh vleFkZrk ds dkj.k vius "kSf{kd okrkoj.k esa vPNh rjg lek;ksftr ugha gks ikrs gSaA "kSf{kd ruko ij fofHkUu izdkj ds pj tSls;ksx vH;kl] O;fDrRo izfrekuksa vkfn dk ldkjkRed izHkko iM+rk gS ¼rksej 2011½A tslh] ,0 ,oa R;kxh bZ0 ¼2013½ }kjk] " ,dLVMh vkWQ ,dSMfed LVªsl vkWQ v.Mj xzstq,V LVwMsUVl bu fjys"ku Vw beks"kuy baVsfytsal" fo'k; ij "kks/k dk;Z fd;kA bl "kks/kdk;Z esa "kks/kdÙkkZvksa us U;kn"kZ ds #i eas ,e0Mh0 jksgrd fo"ofo|ky;] gfj;k.kk ds Lukrd Lrj esa

100%	MATCHING BLOCK 24/145	SA	Suchna Sampreshan Takniki ke Pariprekshya mein ... (D125237457)

v/;;ujr 300 fo|kfFkZ;ksa dk p;u fd;kA

bl v/;;u ds vk/kkj ij ;g fu'd'kZ fudkyk x;k fd "kSf{kd ruko ,oa laosxkRed cqf)erk ds e/; udkjkRed lg&lacaa/k gSaA ¼tSlk fd m)r gSa] "kks/k xaxks=h] bufQfYcusV,lh-bu esaA flag ¼2012½ }kjk Lukrd Lrj ds Nk= @Nk=kvkas ds fpark Lrj dk mPp] e/; ,oa fuEu lkekftd & vkfFkZd Lrj ds ifjis{; esa rqyukRed v/;;u fo'k; ij "kks/kdk;Z fd;k x;kA
54 bl v/;;u esaU;kn"kZ ds #i esavyhx>+ ftyk ds Lukrd Lrj ds 150 fo|kfFkZ;ksadk p;u fd;k x;kA "kks/kdrkZ }kjk ;g fu'd'kZ fudkyk x;k fd mPp lkekftd @ vkfFkZd Lrj ds Nk= @ mPp lkekftd @ vkfFkZd Lrj dh Nk=kvksadh rqyuk esade fpUrk djrs gSa] ,oalEiw.kZ Nk=] Nk=kvksadh rqyuk esade fpark djrs gSa] tcfd e/; lkekftd @ vkfFkZd Lrj ds Nk=] e/; lkekftd@ vkfFkZd Lrj dh Nk=kvkas dh rqyuk esa avf/kd fpark djrssss gSa ¼tSlk fd m)r gS "kks/k xaxks=h] bufQYkfcusV ,lh bu 2021½ cqlkjh ¼2012½ us ik;k fd ruko ekè;fed fo|ky; ds Nk=ksa esa volkn dk dkj.k cu jgk gS vkSj vdknfed miyfCèk ij çHkko ls tqM+k gqvk gSA fuokjd mik;ksa ds ifjp;] thou dkS'ky fl[kkus vkSj vU; fpfdRlh; rduhdksa ij xaHkhjrk ls fopkj fd;k tkuk pkfg,A uankeqjh vkSj xkSreh ¼ 2011½ us O;kolkf;d vè;;u ds Nk=ksa ds chp ruko dk vè;;u fd;k vkSj nkok fd;k fd ikBîØe vkSj funZs'k iSjkehVj 86 çfr'kr ds lkFk ruko ds fy, lcls vfèkd ftEesnkj Fks] blds ckn lyslesaV ls lacafèkr eqíksa ds fy, 63 çfr'kr] ewY;kadu vkSj Vhe odZ ds eqíksa esa 41 çfr'kr vkSj 24 çfr'kr ds fy, ftEesnkj FksA vè;;u us vkxs ruko ds fy, ftEesnkj fofHkUu lw{e eqíksa dh igpku dh] vkSj ikBîØe vkSj funZs'k ls lacafèkr ckjg mi eqíksa dks lwphc) fd;kA ,d ckj çR;sd iSjkehVj ds mi eqíksa dh igpku gks tkus ds ckn] blus vdknfed ç'kkldksa dks vdknfed ruko dh xaHkhjrk dks de djus ds ç;klksa dks 'kq: djus ds fy, csgrj „f"V çnku dhA vxksyk ¼2009½ ds vuqlkj vdknfed gydksa esa ruko ,d egRoiw.kZ fo"k; cu x;k gSA dbZ nk'kZfudksa us ruko ij dkQh 'kksèk fd;k gS vkSj fu"d"kZ fudkyk gS fd bl fo"k; ij vfèkd è;ku nsus dh t:jr gSA jSMfDyQ vkSj ysLVj ¼2003½ us Lukrd vafre o"kZ ds Nk=ksa ds chp çR;kf'kr ruko dk vè;;u fd;k vkSj Lohdkj fd;k fd d{kk vlkbuesaV] i;kZlr ekxZn'kZu ugha] vkil esa feyus vkSj tqM+us dk ncko ruko ds fuekZ.k ds dkj.k FksA eSddsu ,V vy ¼2000½ dk rdZ gS fd Lukrd Nk= çR;sd lsesLVj esa visf{kr le; ij mPp ruko dk vuqHko djrs gSaA vdknfed O;Lrrk] foÙkh; ncko vkSj le; çcaèku dkS'ky dh deh ls ruko dk fuekZ.k gksrk gSA vR;fèkd ruko HkykbZ] HkkoukRed „f"Vdks.k vkSj
55 'kS{kf.kd çn'kZu dks çHkkfor dj ldrk gSA ;gk¡ ij ;g vko';d gks tkrk gS fd Lukrd Nk= rukoiw.kZ fLFkfr;ksa ls fuiVus ds fy, rjhds LFkkfir djsaA jsìh ,V vy ¼2018½ us fu"d"kZ fudkyk fd Nk=ksa ds chp ruko esa ,d cqf)eku èkkjk varj gSA O;fäxr] lkekftd vkSj laLFkkxr Lrjksa ij ruko egRoiw.kZ gSA ruko çcaèku ds fy, fLFkfr;ksa] çfrfØ;k] ;ksx] thou dkS'ky esa f'k{k.k] foLrkj ij è;ku] è;ku vkSj euksfpfdRlk mi;ksxh rduhd ik, x, gSaA ruko ls fuiVus dh ;qfä gS ruko ds ewy dkj.k dks igpkuukA is'ksojksa dks O;fäxr ruko çcaèku rduhdksa dk fodkl djuk pkfg,A Nk=ksa dk ,dh"r LokLF; u dsoy çfrHkkxh ds fy, cfYd laLFkku ds fy, Hkh egRoiw.kZ gSA fnfe=kso ¼2017½ us dgk fd ;g lqfuf'pr djds ruko ls fuiVk tk ldrk gS fd Nk= viuh HkykbZ dks vR;fèkd egRo nsaA Hkkstu] çf'k{k.k] ukSdjh] vodk'k dqN ,sls {ks= gSa tgk¡ ij è;ku dsafær fd;k tkrk gSA mUgksaus ;g Hkh fu"d"kZ fudkyk fd f'k{kk ç.kkyh fo"ofo|ky; dh ;ksX;rk ls vfèkd tqM+h gqbZ gS vkSj i;kZlr :i ls Nk=ksa ds lexz fodkl dh vksj ugha ys tkrh gSA Nk=ksa dks vke rkSj ij bl rjg ls okrkuqdwfyr fd;k tkrk gS fd os pqukSfr;ksa dks 'kq: djus ls Mjrs gSa D;ksafd dsoy f'k{kkfonksa ij tksj fn;k tkrk gS u fd euksoSKkfud fodkl ijA f'k{kk ekè;e ds fy, T;knk fodYi ugha gSaA vaxzsth ,dek= miyCèk fodYi gS tks xzkeh.k Nk=ksa ds fy, ,d ckèkk ds :i esa dk;Z dj ldrk gSA cgqr ls ,sls ikBîØe miyCèk ugha gSa tks ukSdfj;ksa ds fy, foy{k.k gksaA u, Lukrdksa dks lapkj esa vfèkd fo'ks"kKrk dh vko';drk gksrh gS vkSj ;g csgrj fuos'k o`f) ds :i esa dk;Z djrk gSA lqczef.k vkSj dkèkhjou ¼2017½ }kjk vdknfed ruko vkSj ekufld LokLF; ds chp lacaèkksa dks fn[kk;k x;k gSA mUgksaus vdknfed ruko vkSj ekufld LokLF; ds chp lacaèk dk leFkZu fd;k vkSj Nk=ksa ds fy, 'kS{kf.kd lajpuk rax gSA ekrk&firk vkSj Ldwyksa us vius Nk=ksa ij mPp xzsM ds fy, cgqr vfèkd ncko Mkyk] tks vkosndksa dks tksM+us ds fy, grksRlkfgr djrk gS] ekrk&firk vkSj dystksa ls i;kZlr ekxZn'kZu lgk;rk jpukRed :i ls vdknfed esa çn'kZu djus ij Nk=ksa dk fnekx LoLF; jgrk gSA mUgksaus ;g Hkh çLrko j[kk fd vfèkd dke vkSj vU; lacafèkr 'kS{kf.kd xfrfofèk;ksa ds dkj.k ljdkjh Ldwyksa ds Nk=ksa dh rqyuk esa futh Ldwy ds Nk= vfèkd rukoxzLr gksrs gSaA ljdkjh vkSj futh Ldwyksa ds Nk=ksa ds ekufld LokLF; esa lkFkZd varj ns[kk x;kA mUgksaus dgk fd xjhc lkekftd&vkfFkZd bfrgkl okys ljdkjh Ldwyksa ds Nk=ksa dh rqyuk esa futh Ldwy ds Nk=ksa

56 ds lkFk ,d fo'ks"k O;ogkj vkSj O;kid vuqHko Fkk vkSj tksf[ke dh vuqifLFkfr FkhA ;g ruko c>+us ds dkj.kksa esa ls ,d gSA 'kekZ ,V vy ¼2016½ us ruko dks de djus ds fy, fofHkUu „f"Vdks.kksa ds mi;ksx dk lq<ko fn;kA ,d dke fu;fer 'kkjhfjd xfrfofèk djus ls ruko dh leL;k nwj gks ldrh gSA fofHkUu le; çcaèku j.kuhfr;ksa vkSj euksjatd voljksa dks Hkh ykxw fd;k tk ldrk gS tks Nk=ksa dk leFkZu dj ldrs gSaA f'k{kd forj.k 'kSyh esa la'kksèku lekIr gksrk gS vkSj laj{kd f'k{k.k dks rkth gok çnku djsaxsA çHkq ¼2015½ us ekè;fed Nk=ksa dk voyksdu fd;k vkSj ladsr fn;k fd os efgyk Nk=ksa dh rqyuk esa vfèkd rukoxzLr iq#"k Nk= FksA 'kgjh Nk=ksa dk 'kS{kf.kd cks< xzkeh.k ruko okys Nk=ksa ls vfèkd gSA ljdkjh Ldwy ds Nk=ksa dk ruko futh Ldwy ds Nk=ksa ds ruko ls de gksrk gSA lkbal LVªhe ds Nk= vkV~lZ ds Nk=ksa dh rqyuk esa vfèkd mnkl ik, x,A nsc ,V vy ¼2014½ dksydkrk esa 10oha vkSj 12oha d{kk esa i>+us okys ikµp gkbZ Ldwyksa ds 400 iq#"k Ldwyh cPpksa ij 'kksèk fd;kA 35çfr'krNk=ksa esa mPp 'kS{kf.kd ;ksX;rk ruko gS vkSj 37 çfr'kr us mPp Lrj dh fpark çnf'kZr dh gSA dgk tkrk gS fd lhekar ;ksX;rk okys Nk=ksa esa mPp Lrj okys Nk=ksa dh rqyuk esa ruko dk Lrj vfèkd gksrk gSA ikBîsrj xfrfofèk;ksa esa Hkkx ysus okyksa dks bu Nk=ksa ds lacaèk esa vfèkd rukoxzLr gksus ds fy, uksV fd;k x;k gS tks 'kkfey ugha gq, gSA dkSj ¼2014½ us Lohdkj fd;k fd fd'kksj ekufld LokLF; 'kS{kf.kd ruko ls çHkkfor gksrk gSA 'kSf{kd ncko okyh yM+fd;ksa dk ekufld LokLF; yM+dksa dh rqyuk esa [kjkc gksrk gSA vè;;u ls irk pyk gS fd ekrk&firk vDlj Nk=ksa ij ncko vkSj ruko Mkyrs gSaA blls ekufld LokLF; esa fxjkoV vkrh gSA vius 'kksèk esa] cVSusg ¼2013½ us fo"ofo|ky; ds Nk=ksa }kjk lkeuk fd, tkus okys 'kS{kf.kd rukoksa dk vkdyu fd;kA fo'ys"k.kksa ds ifj.kke n'kkZrs gSa fd vdknfed vfèkHkkj vLohdk;Z gS] O;kid lkexzh vkSj ifjokj dh mPp vis{kkvksa ds dkj.k 'kksèk ds fy, i;kZIr le; ugha gS çsj.kk vkSj ruko ds fuEu Lrj dqN dkj.k gSaA vlQyrk dk Mj Hkh lcls egRoiw.kZ pht gS ruko dh O;k[;kA fofHkUu fo'ks"kKrkvksa

100%	MATCHING BLOCK 23/145	SA	SANDEEP SIR HINDI VERSION.pdf (D143525322)

ds Nk=ksa ds chp dksbZ egRoiw.kZ varj ugha

FkkA
57 [kku vkSj dkSlj ¼2013½ us fu"d"kZ fudkyk fd ruko fuf'pr :i ls vdknfed miyfCèk dks udkjkRed rjhds ls çHkkfor djrk gS] gkyk¡fd dksbZ cM+k fyax varj ugha FkkA twfu;j vkSj lhfu;j fo|kfFkZ;ksa ds chp dk varj Li"V gSA ruko fuf'pr :i ls çHkkoh >ax ls lh[kus dh {kerk vkSj le; çcaèku dks çHkkfor djrk gSA le; çcaèku'kS{kf.kd ncko dks de djus ds fy, nSfud vè;;u vko';d gSA cqlkjh ¼2012½

88%	MATCHING BLOCK 25/145	SA	SANDEEP SIR HINDI VERSION.pdf (D143525322)

us ik;k fd ekè;fed fo|ky; ds Nk=ksa ds chp

ruko us volkn esa ;ksxnku fn;k vkSj vdknfed ifj.kkeksa ij çHkko ls lacafèkr gSA jksdFkke vkSj funZs'k dk ifjp; n{krkvksa vkSj vU; eqdkcyk djus dh j.kuhfr;ksa dks xaHkhjrk ls fy;k tkuk pkfg,A is'ksoj Nk=ksa ds chp ruko dk vè;;u uankeqjh vkSj xkSreh ¼2011½ }kjk fd;k x;k Fkk vkSj ikBîØe vkSj fn'kk ds ekunaM 86 çfr'kr ds lkFk ruko ds fy, lcls vfèkd ftEesnkj Fks] blds ckn lyslesaV] ewY;kadu vkSj Vhe odZ ls lacafèkr leL;kvksa ds fy, 63 çfr'kr FksA vuqeku Øe'k% 41% vkSj 24% FksA fo'ys"k.k esa dbZ ekbØksQksu ruko ds eqís Hkh ik, x,] vkSj ikBîØe vkSj çf'k{k.k ls lacafèkr 12 mi&leL;kvksa dk mYys[k fd;k x;k gSA tc çR;sd iSjkehVj dh mi&leL;k,¡ LFkkfir dh tkrh gSa] rks vdknfed us vius fotu ç'kkldksa dks Nk= ruko xaHkhjrk dks de djus ds ç;klksa dks 'kq: djus ds fy, c>+k;k gSA vxksyk ¼2009½ ds vuqlkj] vdknfed gydksa esa ruko ,d egRoiw.kZ fo"k; cu x;k gSA dbZ nk'kZfudksa us dkQh ruko vuqlaèkku fd;k vkSj fu"d"kZ fudkyk fd bl fo"k; ij vfèkd è;ku nsus dh vko';drk gSA 'kS{kf.kd leL;kvksa dks Nk=ksa ds fy, ruko dk lcls vke lzksr crk;k x;k gS ¼,YMfou vkSj xzhucxZj] 1987½A 'ksQ+j ¼1996½ us ns[kk fd lcls vfèkd ijs'kku djus okyh nSfud ijs'kkfu;k¡ vkerkSj ij Ldwy ls lacafèkr ruko tSls vè;;u dk fujarj ncko] cgqr de le;] VeZ isij fy[kuk] ijh{kk nsuk] Hkfo"; dh ;kstuk,¡ vkSj mckÅ çf'k{kd FksA 'kS{kf.kd xfrfofèk;ksa ls tqM+s ruko dks fofHkUu udkjkRed ifj.kkeksa ls tksM+k x;k gS] tSls fd [kjkc LokLF; ¼xzhucxZ] 1981(ysLdks vkSj lejQhYM] 1989½] volkn ¼ ,YMfou vkSj xzhucxZj] 1987½] vkSj [kjkc 'kS{kf.kd çn'kZu ¼DykdZ ,aM jhdj] 1986(fyuu½ vkSj t+slik]

58 1984½A ysLdks vkSj lejQhYM ¼1989½ us chekjh dh ?kVukvksa vkSj ijh{kkvksa vkSj vlkbuesaV dh la[;k ds chp ,d egRoiw.kZ ldkjkRed lacaèk ik;kA ,YMfou vkSj xzhucxZj ¼1987½ us ns[kk fd dfFkr 'kS{kf.kd ruko dyst ds Nk=ksa esa fpark vkSj volkn ls lacafèkr FkkA dbZ vè;;uksa us ruko vkSj [kjkc vdknfed çn'kZu ¼DykdZ ,aM jhdj] 1986(fyu ,aM t+slik] 1984(LV³wFklZ] isjh ,aM esusd] 2000½ ds chp lacaèkksa dk irk yxk;k gSA QsyLVu vkSj foydDl ¼1992½ us dyst ds Nk=ksa ds ruko ds Lrj vkSj muds 'kS{kf.kd çn'kZu ds chp ,d egRoiw.kZ udkjkRed lg&lacaèk ik;kA blh rjg] ,d vè;;u esa] CyecxZ vkSj ¶ysgVÊ ¼1985½ us Lo&fjiksVZ fd, x, ruko Lrj vkSj 'kS{kf.kd çn'kZu ds chp ,d foijhr lacaèk ik;kA LV³wFklZ ,V vy ¼2000½ us ;g Hkh crk;k fd mPp Lrj dk vdknfed ruko fuEu ikBîØe xzsM ls tqM+k FkkA ijh{kk] vlkbuesaV] le; ds ncko] xzsM ncko vkSj vfuf'prrk ds dkj.k Nk= mPp Lrj ds 'kS{kf.kd ruko dk vuqHko djrs gSaA la{ksi esa] bl ruko dk muds 'kS{kf.kd çn'kZu ij gkfudkjd çHkko iM+rk gSA rukoxzLr cPps HkkoukRed v{kerk] vkØked O;ogkj] 'keÊysiu] lkekftd Hk; ds y{k.k fn[kkrs gSa vkSj vDlj euksjatd xfrfofèk;ksa esa mudh #fp dh deh gksrh gSA ,d vè;;u esa nkÅn ¼1995½ us [kqyklk fd;k fd Nk=ksa dk ruko muds vdknfed çn'kZu dks çHkkfor djrk gSA mUgksaus vkxs fn[kk;k fd Nk=ksa }kjk lcls vfèkd ckj mYys[k fd;k x;k ruko Ldwy vkSj Hk; ls lacafèkr ruko FkkA dbZ fd'kksj fofHkUu çdkj dh c>+rh gqbZ fparkvksa ds tokc esa xSj&vuq:irkoknh cu tkrs gSa vkSj fd'kksj volkn ds f'kdkj gks tkrs gSaA gkyk¡fd] cPpksa esa ruko çsfjr Hk; vkSj fpark fofHkUu Lrjksa ij cPpksa ds çn'kZu ij çfrdwy çHkko Mkyrh gSA vke rkSj ij rukoiw.kZ fLFkfr dh çfrfØ;k O;fäxr ewY;kadu vkSj O;k[;kvksa ij vkèkkfjr gksrh gS] ysfdu dqN fLFkfr;k¡ LokHkkfod :i ls nwljksa dh rqyuk esa vfèkd rukoiw.kZ gksrh gSaA tc Nk= rukoiw.kZ fLFkfr;ksa dh O;k[;k djrs gSa tks [krjukd ls [krjukd gksrh gSa rks os ruko] vk'kadk vkSj fpark dh Hkkoukvksa dk vuqHko djrs gSaA os Lok;Ùk raf=dk ra= dh lfØ;rk ds ifj.kkeLo:i dbZ 'kkjhfjd vkSj O;ogkfjd ifjorZuksa ls Hkh xqtjrs gSaA çfrfØ;k
59 dh rhozrk dfFkr [krjs ;k [krjs ds ifjek.k ds lekuqikrh gksrh gS ¼ iapukFk vkSj 'kueqxxuhlu] 1992½A ruko ds dkj.k gksus okys O;ogkj ifjorZu cM+h la[;k esa pj ij fuHkZj djrs gSa tSls ruko mÙkstuk dh ç"fr vkSj rhozrk] O;fä ds fiNys vuqHko] vkSj O;fä ds okrkoj.k esa lkekftd leFkZu dk vfLrRo vkSj fMxzhA gyeaMkfjl ,aM ikoj ¼1999½ esa O;fäRo pj ¼cfg"dkj(dkeqdrk] vkSj miyfCèk çsj.kk½] dfFkr] lkekftd leFkZu vkSj fo"ofo|ky; thou ds fy, lexz eukslkekftd lek;kstu ¼vdsysiu dh vuqifLFkfr vkSj lexz O;fäijd larqf"V }kjk ekik x;k½ ds chp lacaèkksa dk vè;;u fd;kA ys[kdksa us ijh{kk ds ruko] eukslkekftd lek;kstu vkSj vdknfed çn'kZu ls eqdkcyk djus vkSj tulkaf[;dh; O;fäRo] eqdkcyk vkSj lkekftd leFkZu vkSj fo"ofo|ky; ds thou ds fy, eukslkekftd lek;kstu ls fo"ofo|ky; ds thou esa eukslkekftd lek;kstu dh Hkfo";ok.kh dhA Hkkouk dsafær eqdkcyk ldkjkRed :i ls fof{kIrrk ds lkFk lg&laca/k gS vkSj leL;k dsafær eqdkcyk miyfCèk çsj.kk ds lkFk lg&laca/k gSA O;fäRo vkSj ijh{kk ds ruko ls fuiVus ds fofHkUu rjhdksa ds chp dbZ lacaèk crk, x,A O;fäRo ruko gh ,dek= ,slk ifjorZu'khy dkjd Fkk tks vdknfed çn'kZu ds lkFk egRoiw.kZ :i ls lg&laca/k FkkA cykbZ] t;çdk'k ¼2017½ }kjk lgf'k{kk ,oa xSj&lgf'k{kk ds fd'kksj fo|kfFkZ;ksa esa dq.Bk dk v/;;u fo"k; ij 'kks/k dk;Z fd;kA mís';& 1- lgf'k{kk ,oa xSj&lgf'k{kk ds fd'kksj fo|kfFkZ;ksa esa dq.Bk dk v/;;u djukA fu"d"kZ& 1- lgf'k{kk ,oa xSj&lgf'k{kk fo|ky;ksa ds fd'kksj fo|kfFkZ;ksa esa O;klr dq.Bk ds e/;ekuksa esa lkFkZd vUrj ik;k x;kA 2- lgf'k{kk ,oa xSj&lgf'k{kk fo|ky;ksa ds fd'kksj Nk=ksa esa O;klr dq.Bk ds e/;ekuksa esa lkFkZd vUrj ik;k x;kA 3- lgf'k{kk ,oa xSj&lgf'k{kk fo|ky;ksa dh fd'kksj Nk=kvksa esa O;klr dq.Bk ds e/;ekuksa esa lkFkZd vUrj ugha ik;k x;kA feJk] eSddsu] osLV] vkSj :lks ¼2000½ us

100%	MATCHING BLOCK 26/145	SA	SARITA HINDI VERSION.docx (D143553953)

dyst ds iq#"k vkSj efgyk Nk=ksa ds

chp vdknfed ruko dh èkkj.kkvksa dh tk¡p dh] vkSj Nk=ksa ds vdknfed ruko ds ladk; vkSj Nk= èkkj.kkvksa dh rqyuk dhA uewus esa ,d feMosLVuZ ;wfuoflZVh ds 249 Nk= vkSj 67 QSdYVh lnL; 'kkfey Fks A Nk=ksa vkSj ladk; lnL;ksa dh vkSlr vk;q Øe'k% 21 o"kZ vkSj 42 o"kZ FkhA ifj.kkeksa us f'k{kdksa vkSj Nk=ksa ds chp Nk=ksa ds ruko vkSj ruko ds çfr
60 çfrfØ;kvksa ds ckjs esa mudh èkkj.kkvksa esa dkQh csesy gksus dk ladsr fn;kA ladk; lnL;ksa us Nk=ksa dks mPp Lrj ds ruko dk vuqHko djus vkSj okLro esa dfFkr Nk=ksa dh rqyuk esa ruko ds çfr çfrfØ;kvksa dks vfèkd ckj çnf'kZr djus ds fy, eglwl fd;kA bldk ifj.kke dsoy d{kk esa ruko ds {k.kksa ds nkSjku Nk=ksa dks ns[kus okys ladk; ls gks ldrk gSA ifj.kkeksa us mu ifjdYiukvksa dk Hkh leFkZu fd;k tks Ldwy esa vkSj fyax ds vkèkkj ij o"kZ Hkj esa fHkUu gksrh gSaA f=ikBh] mfeZyk ¼2017½ }kjk O;kolkf;d ikBîØe esa ços'k gsrq dksfpax ysus okys fd'kksj fo|kfFkZ;ksa dh ijh{kk dh fpUrk dk v/;;u fo"k; ij 'kks/k fd;kA mís';& 1- esfMdy o baftfu;fjax ikBîØe esa ços'k gsrq dksfpax laLFkkvksa esa v/;;ujr Nk=ksa dh ijh{kk dh fpUrk dk v/;;u djukA 2- esfMdy o baftfu;fjax ikBîØe esa ços'k gsrq dksfpax laLFkkuksa esa v/;;ujr Nk=kvksa dh ijh{kk dh fpUrk dk v/;;u djukA 3- esfMdy o baftfu;fjax ikBîØe esa ços'k gsrq dksfpax laLFkkuksa esa v/;;ujr Nk=&Nk=kvksa dh ijh{kk dh fpUrk dk rqyukRed v/;;u djukA 1- esfMdy o baftfu;fjax ikBîØe esa ços'k gsrq laLFkkuksa esa v/;;ujr fo|kfFkZ;ksa dh ijh{kk dh fpUrk dk rqyukRed v/;;u Nk=&Nk=kvksa dh ijh{kk dh fpUrk esa dksbZ lkFkZd vUrj ugha gSA 2- baftfu;fjaxd ikBîØe esa ços'k gsrq dksfpax laLFkkuksa esa v/;;ujr Nk= o Nk=kvksa dh ijh{kk dh fpUrk esa dksbZ lkFkZd vUrj ugha gSA 3- esfMdy o baftfu;fjax ikBîØe esa ços'k gsrq dksfpax laLFkkuksa esa v/;;ujr

76%	MATCHING BLOCK 27/145	SA	Suchna Sampreshan Takniki ke Pariprekshya mein ... (D125237457)

Nk=ksa dh ijh{kk dh fpUrk esa dksbZ lkFkZd vUrj ugha gSA 4-

esfMdy o baftfu;fjax ikBîØe esa ços'k gsrq dksfpax laLFkkuksa esa v/;;ujr Nk=kvksa dh ijh{kk dh fpUrk esa dksbZ lkFkZd vUrj ugha gSA 5- esfMdy o baftfu;fjax ikBîØe esa ços'k gsrq dksfpax laLFkkuksa esa v/;;ujr Nk= o Nk=kvksa dh ijh{kk dh fpUrk esa dksbZ lkFkZd vUrj ugha gSA djukA fu"d"kZ& 1- esfMdy ikBîØe esa ços'k gsrq dksfpax laLFkkuksa esa v/;;ujrA ,fjd] LVhoVZ vkSj ,usfMek ¼2002½ us vdknfed miyfCèk ls tqM+s nks dkjdksa dh tk¡p dh laL"frdj.k vkSj lkekftd leFkZuA uewus esa nf{k.k&if'peh Ldwy ftys esa eSfDldu lH; ds 60 ukSoha d{kk ds Nk= 'kkfey FksA ifj.kkeksa us ladsr fn;k fd vR;fèkd ,dh"r vkSj „ >+rk ls ,aXyks&mUeq[k f}lkaL"frd ds :i esa igpkus tkus okys Nk=ksa esa mPp 'kS{kf.kd miyfCèk gksrh gSA lkekftd leFkZu dks lHkh pkj lzksrksa ls lexz :i ls ekuk tkrk FkkA gkyk¡fd dksbZ ih>+hxr çHkko dh igpku ugha dh xbZ Fkh] efgykvksa esa mPp xzsM lokbaV vkSlr ¼thih,½ Fkk] vkSj vfèkd lkekftd leFkZu ekuk tkrk Fkk] tcfd iq#"kksa] fnypLi :i ls] FkksM+k vfèkd laLdkjh FksA
61 fe'ksy] Xygu] vkSj czs ¼2001½ us mu dkjdksa dk ewY;kadu fd;k tks mPp f'k{kk esa çR;{k vkSj iqu% ços'k Nk=ksa ds fy, vdknfed vkRe voèkkj.kk] vkRe lEeku vkSj vdknfed ruko dks çHkkfor djrs gSaA mPp f'k{kk dh LFkkiuk ¼,pbZ½ vke rkSj ij ,d vfèkd fofoèk Nk= vkcknh dh HkrÊ dj jgh gSA bl 'kksèk us fo'ks"k :i ls çR;{k vkSj iqu% ços'k Nk= ds Lukrd Nk= vuqHko esa varj dh tk¡p dh gSA vè;;u esa 112 Lukrd çR;{k vkSj iqu% ços'k Nk= us Hkkx fy;kA Ng Hkkx dh ç'ukoyh dk mi;ksx mez] fyax] Ldwy ds fiNys vuqHkoksa vkSj lgh oSf"od vkRe lEeku] vdknfed vkRe voèkkj.kk vkSj vdknfed ruko ij ,pbZ esa Hkkx ysus ds fy, çsj.kk ds çHkko dh tk¡p ds fy, fd;k x;k FkkA iqu% ços'k ds Nk=ksa us Hkh lcls udkjkRed vuqHkoksa dh lwpuk nh] ;g lq<ko nsus ds fy, fd efgykvksa us iq#"kksa dh rqyuk esa vfèkd vuqHko fd;kA ;fn ,pbZ esa Hkkx ysus dk dkj.k dSfj;j ds y{;ksa ds fy, Fkk] rks 'kS{kf.kd ruko dk Lrj mPpre FkkA tc Hkkx ysus dk dkj.k laKkukRed #fp ds fy, Fkk] vdknfed vkRe voèkkj.kk ldkjkRed Fkh vkSj mu O;fä;ksa ds lkFk lcls vfèkd larqf"V dh lwpuk nhA cgq lekJ;.k fo'ys"k.k us vdknfed vkRe&voèkkj.kk] vkRe&lEeku vkSj vdknfed ruko ls lacafèkr pjksa ds ,d tfVy varlZacaèk dk [kqyklk fd;kA ,pbZ esa lq<k, x, bu fu"d"kksZa dks dsoy vk;q Lrjhdj.k }kjk ugha le<k;k tk ldrk gSA vDxqu vkSj fl;kjksph ¼2003½ us ifjdYiuk dh fd vR;fèkd lkèku laiUu Nk= [kqn dks vdknfed ruko ds çfrdwy çHkkoksa ls cpkus esa nwljksa dh rqyuk esa vfèkd çHkkoh gksaxs] vkSj ml ruko dks vius xzsM dks çHkkfor ugha djus nsaxsA 141 çFke o"kZ ds Lukrd Nk=ksa ds ,d uewus us 'kS{kf.kd ruko vkSj lh[kh xbZ lalkèku'khyrk ds mik;ksa dks iwjk fd;kA muds çFke o"kZ ds 56 FksA fo"ofo|ky; ds fjdMZ ls çkIr fd, x, FksA fo'ys"k.k ls irk pyk fd vdknfed ruko vdknfed çn'kZu ls udkjkRed :i ls tqM+k gqvk FkkA mPp 'kS{kf.kd ruko us de lkèku laiUu Nk=ksa ds xzsM ij çfrdwy çHkko Mkyk ysfdu mPp lkèku laiUu Nk=ksa ij bldk dksbZ çHkko ugha iM+kA ,jhelks;] lsyheh vkSj xsudkst ¼2005½ us ,d vdknfed ruko dk lkeuk djus okys ;qok o;Ldksa ds fy, volkn vkSj fpark ds y{k.kksa ds lacafèkr pj

84%	MATCHING BLOCK 28/145	SA	AMIT KUMAR THESIS(1).pdf (D123770339)

dk irk yxkus ds fy, ,d vè;;u fd;kA bl vè;;u

esa fuU;kuos Lukrd Nk=] tks viuh Fkhfll rS;kj djus esa lfØ; :i ls 'kkfey Fks] us Hkkx fy;kA volkn vkSj fpark ds y{k.kksa ls tqM+s fofHkUu pjksa dks vyx&vyx ns[kus ds fy, nks çfrxeu fo'ys"k.k fd, x,A mEehnksa ds vuq:i] volkn
62 vkSj fpark us udkjkRed Lopkfyr fopkjksa vkSj fujk'kk tSls Hkfo";oäkvksa dks [kks fn;k FkkA gkyk¡fd] leL;k lekèkku {kerkvksa dh i;kZIrrk fpark ds y{k.kksa ls tqM+h gqbZ çrhr gksrh gSA xksokV~lZ vkSj xzsxksbjs ¼2005½ us fd'kksjksa }kjk ruko dk vuqHko djus ds rjhds ij laKkukRed ewY;kadu çfØ;kvksa dh egRoiw.kZ Hkwfedk dk irk yxk;kA bl 'kksèk esa fd'kksjksa dh laKkukRed ewY;kadu çfØ;kvksa vkSj vdknfed ruko ds lkFk muds lacaèkksa dh tk¡p dh xbZA fd'kksjksa ds ,d uewus ¼,u ¾ 100] vkSlr vk;q ¾ 16-9 o"kZ½ us 145 'kS{kf.kd rukoiw.kZ fLFkfr dh lwpuk nh] tcfd yM+dksa us [kqn dks blls fuiVus ds fy, vfèkd l{ke ekukA Nk=ksa dh mez bl èkkj.kk ds lkFk udkjkRed :i ls lg&laca/k Fkh fd rukoiw.kZ fLFkfr vius vki gy gks tk,xhA DyLVj fo'ys"k.k dk mi;ksx djds ik¡p ewY;kadu iSVuZ dh igpku dh xbZA ckn ds fo'ys"k.k ls irk pyk fd ik¡p lewg vius dfFkr ruko dh fMxzh esa fHkUu gSaA ,d lewg dks mPp Lrj ds dfFkr ruko dk ç'n'kZu djrs gq, tksf[ke okys ewY;kadu lewg dk yscy fn;k x;k Fkk] vkSj nks lewgksa us dfFkr ruko ds fuEu Lrj ls tqM+s ,d vuqdwy iSVuZ fn[kk;kA gqvku] ;svks] vkax vkSj pksax ¼2005½ us 'kS{kf.kd ruko ds ckjs esa Nk=ksa dh èkkj.kk ij fyax ds lkFk vk'kokn dh Hkwfedk dh tk¡p dhA flaxkiqj ds pkj lkS rhl ekè;fed fo|ky; ds Nk=ksa us bl vè;;u esa Hkkx fy;k vkSj nks vkRe&fjiksVZ mik;ksa

100%	MATCHING BLOCK 29/145	SA	SARITA HINDI VERSION.docx (D143553953)

dk mi;ksx djds MsVk ,d= fd;k x;k

ykbQ vksfj,aVs'ku VsLV vkSj vdknfed ,DlisDVs'kal LVªsl bUosaVjhA ifj.kkeksa us Nk=ksa esa vk'kkokn vkSj 'kS{kf.kd ruko ds chp ,d egRoiw.kZ udkjkRed lacaèk dk [kqyklk fd;kA fyax vdknfed ruko dk ,d egRoiw.kZ Hkfo";oäk ugha Fkk vkSj çfrHkkfx;ksa ds vk'kkokn vkSj fyax ds chp dksbZ nks&rjQk ckrphr ugha ikbZ xbZA ft+;k vkSj 'kkW ¼2005½ us lajpukRed lehdj.k eMfyax fo'ys"k.k dks ykxw djds fofHkUu ruko lzksrksa] eqdkcyk j.kuhfr;ksa vkSj efgyk fo"ofo|ky; ds Nk=ksa dh udkjkRed Hkkoukvksa ds chp lacaèkksa dh tk¡p dhA ifj.kkeksa us ladsr fn;k fd & ¼1½ udkjkRed Hkkouk ij ruko vkSj eqdkcyk djus dh j.kuhfr;ksa ds vuqekfur çHkko egRoiw.kZ FksA ¼2½ ruko] eqdkcyk djus dh j.kuhfr;ksa vkSj udkjkRed Hkkoukvksa ds ckjs esa çfØ;k eMy dbZ igyqvksa esa lzksrksa esa fHkUu FksA vdknfed ruko dk u dsoy udkjkRed Hkkoukvksa ij

63 lhèkk çHkko iM+rk gS] cfYd udkjkRed leL;k&lekèkku j.kuhfr;ksa ds ekè;e ls vçR;{k çHkko Hkh iM+rk gSA udkjkRed leL;k&lekèkku vkSj leFkZu çkIr djus okyh j.kuhfr;ksa ds ekè;e ls vkfFkZd ruko dk udkjkRed Hkkoukvksa ij dsoy vçR;{k çHkko iM+rk gSA udkjkRed Hkkoukvksa ij çR;{k çHkko ds vykok] ikjLifjd ruko dk udkjkRed leL;k&lekèkku vkSj leFkZu çkIr djus okyh j.kuhfr;ksa ds ekè;e ls udkjkRed Hkkoukvksa ij Hkh vçR;{k çHkko iM+rk gSA ¼3½ 'kS{kf.kd] vkfFkZd ;k ikjLifjd fLFkfr ls tks Hkh ruko gks] udkjkRed leL;k&lekèkku vkSj leFkZu ek¡xus okyh j.kuhfr;ksa dk ges'kk udkjkRed Hkkoukvksa ij egRoiw.kZ çHkko iM+rk gSA eQ+Z ¼2006½ us dyst ds Nk=ksa esa vdknfed lQyrk ij ruko ds çHkko dk irk yxk;kA og ruko ij ,d ppkZ çnku djrk gS vkSj ;g Nk=ksa dks muds 'kSf{kd y{;ksa dks iwjk djus esa lQy gksus ls dSls jksd ldrk gSA lkfgR; bl rF; dk leFkZu djrk gS fd ruko ,d O;fä ij ek¡x djrk gS] vkSj ruko ds tokc esa] 'kjhj lkekU; fLFkfr ¼lsyh] 1974½ dh Hkkouk dks cuk, j[kus ds fy, rukoiw.kZ vuqHko ds vuqdwy gksus dk ç;kl djrk gSA lkfgR; esa ,d vkSj vke fo"k; ;g gS fd dyst ds Nk=ksa dks ruko ds ,d vuwBs lsV dk lkeuk djuk iM+rk gS tks Hkkjh gks ldrk gS] bl çdkj ,d fLFkfr ls fuiVus dh {kerk dks cny ldrk gSA ruko de djus dh j.kuhfr;k¡ dyst ds Nk=ksa esa vdknfed lQyrk ls tqM+h gqbZ gSa ¼fMt+hxsysLdh ,V vy] 2004½A dyst ds Nk=ksa ds ikl rukoiw.kZ vuqHkoksa ;k rukoksa dk ,d vuwBk lewg gksrk gS ¼xSjsV] 2001½A varjkZ"Vªh; Nk=ksa ds lkeus vdknfed ruko ,d xaHkhj leL;k gSA Qyd ¼2007½ us la;qä jkT; vesfjdk ds fofHkUu 'kS{kf.kd laLFkkuksa esa 132 Lukrd vkSj Lukrd Nk=ksa dk vè;;u fd;kA ruko ij mudk loZs{k.k fd;k x;k tc mUgksaus 10 lkekU; 'kS{kf.kd fLFkfr;ksa dk vuqHko fd;k vkSj lkeuk fd;k vkSj ml ruko ls eqdkcyk djus esa mudk vkRefo"okl FkkA fjiksVZ fd, x, ruko dks Nk=ksa dh dqN fo'ks"krkvksa ¼vk;q] ek¡xh xbZ fMxzh dk Lrj] vkSj fiNys xzsM lokbaV vkSlr½ vkSj mudh vaxzsth Hkk"kk dh {kerk] vkSj vdknfed vkSj leL;k&lekèkku dkS'ky ds ckjs esa mudh èkkj.kkvksa ls lacafèkr ik;k x;kA

64 dyst ds Nk= ruko dk vuqHko djus ds fy, cgqr detksj lewg gSa] ftuesa ls mÙkjk)Z fofHkUu çdkj ds ifj.kkeksa ls lacafèkr gS] tSls fd LokLF; vkSj 'kS{kf.kd çn'kZuA usXxk] ,sIiyohVj] & yhohaxLVu ¼2007½ us vÝhdh vesfjdh dyst ds Nk=ksa ds ruko dk vkdyu fd;kA ;g irk pyk fd ruko ds 'kh"kZ ik¡p lzksr Fks: ifjokj ds ,d lnL; dh e`R;q ¼ikjLifjd ruko½ 82% (fuEu xzsM ¼vdknfed ruko½ 69% (le; çcaèku ¼vdknfed ruko½ 61% (çseh@çsfedk dh leL;k,¡ ¼ikjLifjd ruko½ 57% (vkSj NwVh gqbZ d{kk,¡a ¼vdknfed ruko½ 55% A blds vykok] lHkh Nk=ksa ds fy, vkRe&lEeku] lkekftd leFkZu vkSj ruko ds chp egRoiw.kZ lacaèk ik;k x;kA vè;;u us dyst vkSj fo"ofo|ky;ksa dks ruko gLr{ksi dk;ZØe fodflr djus dh vko';drk dh vksj b'kkjk fd;k tks fo'ks"k :i ls uLy vkSj Ldwy uLyh; jpukvksa ds vkèkkj ij ruko dks lacksfèkr djrs gSaA ysmax ¼2007½ us eMjsfVax vkSj eè;LFkrk ra= dh tk¡p dh ftlds ekè;e ls ekrk&firk dk leFkZu vkSj cPpksa dh lalkèku'khyrk ruko ds ifj.kkeksa dks la'kksfèkr dj ldrh gSA oSf"od 'kS{kf.kd ckèkkvksa ds eki dh rqyuk esa Mksesu fo'ys"k.k fyax varj ds çfr vfèkd laosnu'khy lkfcr gqvkA ^^yM+fd;k¡ vdknfed v{kerk vkSj foQyrk ds Mj ls vfèkd ijs'kku Fkha vkSj yM+ds egRoiw.kZ nwljksa ls vis{kkvksa vkSj ek¡xks vkSj vdknfed ek¡xksa vkSj vfèkHkkj ls vfèkd çHkkfor FksA^^ iqVosu ¼2007½ us Nk=ksa esa vdknfed ruko vkSj fpark dk vè;;u fd;kA ;kuh Ldwyh cPpksa esa vdknfed ruko vkSj ;g dSls HkkoukRed dY;k.k] LokLF; vkSj Ldwy ds vkdyu ij çn'kZu dks çHkkfor dj ldrk gSA dbZ ekeyksa esa ruko dk mi;ksx mÙkstuk ds xq.kksa ¼tSls ,d ijh{kk½ vkSj vU; ekeyksa esa ladV ds O;fäijd vuqHko dks lanfHkZr djus ds fy, fd;k tk jgk gSA lksycxZ] dkyZLVªe] goMZ vkSj tksUl ¼2007½ us tksf[ke okys gkbZ Ldwy ds ;qokvksa dks DyLVj fo'ys"k.k dk mi;ksx djds " lkeqnkf;d fgalk vkSj 'kS{kf.kd vkSj LokLF; ifj.kkeksa ij lqj{kkRed dkjdksa ds çHkko dk çHkko" oxÊ"r fd;kA 789 eq[; :i ls ykrhuh vkSj vÝhdh vesfjdh gkbZ Ldwy ds ;qokvksa dks vdknfed vkRefo"okl ds Lo&fjiksVZ fd, x, Lrjksa] Ldwy esa Hkkx ysus dh çsj.kk] dfFkr ikfjokfjd leFkZu] f'k{kdksa vkSj lkfFk;ksa ds lkFk lacaèk] vkSj fgalk ds tksf[ke dk mi;ksx djds vyx&vyx 'kS{kf.kd tksf[ke okys çksQkby esa oxÊ"r fd;k x;k FkkA Ng DyLVj mHkjs] ftuesa ls 5 dks tksf[ke ds :i esa igpkuk

65 x;kA 'kS{kf.kd ruko] LokLF; dh fLFkfr] xzsM vkSj Ldwy çfrèkkj.k ds lacaèk esa lewgksa dh tk¡p dh xbZA VSu] vkax] Dyklsu] ;svks] oksax] gqvku vkSj pksax ¼2008½ us flaxkiqj ls 226 Lukrd ds uewus esa vdknfed foyac vkSj Nk= ds xzsM y{;ksa ds lg&lacaèkksa dks fuèkkZfjr fd;kA fu"d"kksZa us ladsr fn;k fd Lo&fofu;fer lh[kus ds fy, vkRe&çHkkodkfjrk egRoiw.kZ vkSj udkjkRed :i ls foyac ls lacafèkr FkhA Lo&fofu;fer lh[kus ds fy, mPp vkRe&çHkkodkfjrk us Nk=ksa dh vPNh rjg ls djus dh vis{kkvksa dh Hkfo";ok.kh dh vkSj Lo&fofu;fer lh[kus ds fy, de vkRe&çHkkodkfjrk us Nk=ksa dh vdknfed :i ls vPNk ugha djus dh mEehn dh Hkfo";ok.kh dhA blds vfrfjä] enn ek¡xus okys Nk=ksa dh vdknfed :i ls vPNk djus dh vis{kk,¡] tcfd vdknfed ruko us Nk=ksa dh vdknfed :i ls vPNk ugha djus dh vis{kk dh Hkfo";ok.kh dhA 'kSuu vkSj ,fytkcsFk ¼2008½ us ,d varjjk"Vªh; Lrj ds gkbZ Ldwy fMlyksek dk;ZØe esa Hkkx ysus okys 139 Nk=ksa esa ruko] eqdkcyk vkSj ekufld LokLF; ds chp lacaèkksa dh tk¡p dhA ifj.kkeksa ls irk pyk fd vkbZch dk;ZØe esa Nk=ksa us vius lkekU; f'k{kk lkfFk;ksa ds 168 ds uewus dh rqyuk esa dkQh vfèkd ruko eglwl fd;kA gqvku] lh vkax vkSj gj ¼2008½ us fd'kksjksa dh fparkvksa ds muds 'kS{kf.kd ruko ij çHkko dk irk yxk;kA bl vè;;u dk mís'; flaxkiqj esa ;qokvksa ds 'kS{kf.kd ruko ij fd'kksjksa dh fparkvksa ds fofHkUu igyqvksa dh ;ksxnku Hkwfedk dh tk¡p djuk FkkA vè;;u us fd'kksjksa dh fparkvksa ds pkj vyx&vyx igyqvksa dh tk¡p dh ifjokj] O;fäxr] lgdeÊ vkSj Ldwy dh fpark,¡A bu Hkfo";okf.k;ksa ds lkFk&lkFk fd'kksjksa }kjk vuqHko fd, x, 'kS{kf.kd ruko ds lanHkZ esa Hkh fyax varj dk irk yxk;

87%	MATCHING BLOCK 30/145	SA	AMIT KUMAR THESIS(1).pdf (D123770339)

k x;k FkkA ifj.kkeksa ls irk pyk fd dsoy O;

fäxr ij Ldksj(ljksdkj lcLdsy ldkjkRed :i ls fd'kksj yM+dksa vkSj yM+fd;ksa nksuksa esa Lo;a vkSj vU; vis{kkvksa ls mRiUu 'kS{kf.kd ruko ls tqM+s FksA yM+fd;ksa ds fy,] Ldwy ls lacafèkr fpark,¡ vU; vis{kkvksa ls mRiUu gksus okys 'kS{kf.kd ruko dh Hkh Hkfo";ok.kh FkhaA mUgksaus yM+dksa dh rqyuk esa vdknfed vis{kkvksa ruko lwph ij dkQh vfèkd vad çkIr fd,A C;ksdZeSu ¼2008½ us miuxjh; bfyuksbl ls NBh] lkroha vkSj vkBoha d{kk ds Nk=ksa ¼,u ¾ 268½ ds uewus esa vdknfed ruko] lkekftd leFkZu] vkSj vkarfjd vkSj ckgjh O;ogkj ij ,d vè;;u fd;kA ;g irk pyk Fkk fd 'kS{kf.kd ruko çklafxd fuekZ.k gS] tc ruko ds
66 laHkkfor lzksrksa dh tk¡p djrs le; fopkj fd;k tkrk gS fd twfu;j gkbZ Nk=ksa ds vuqHko] vkSj yM+fd;k¡ vkSj yM+ds leku Lrj ds 'kS{kf.kd ruko dh fjiksVZ djrs gSaA ;g yM+fd;ksa vkSj yM+dksa ds fy, leku :i ls vkarfjd leL;kvksa ls lacafèkr çrhr gksrk gS] gkyk¡fd vkarfjddj.k vkSj ckgjh O;ogkj vdknfed ruko ds fofHkUu lzksrksa ls lacafèkr gSaA ekrk&firk vkSj lgikfB;ksa ls lkekftd leFkZu ruko ds fuEu Lrj ls lacafèkr Fkk] vkSj ekrk&firk] f'k{kdksa vkSj lgikfB;ksa ls leFkZu oÙkZeku uewus esa de vkarfjd leL;kvksa ls lacafèkr FkkA bl vè;;u ds ifj.kkeksa us lq<ko fn;k fd HkkoukRed vkSj O;ogkj lacaèkh leL;kvksa ds laHkkfor lg&lacaèkksa dh tk¡p djrs le; vdknfed ruko ,d çklafxd fuekZ.k gSA vdknfed ruko Hkh lkekftd leFkZu ls lacafèkr Fkk] gkyk¡fd lkekftd leFkZu us oÙkZeku vè;;u esa cQj ds :i esa dk;Z ugha fd;kA ruko de djus ds dkS'ky ds fof'k"V funZs'k ds lkFk çkjafHkd igpku] ruko ds çfr Nk=ksa dh çfrfØ;k dks jksdus vkSj mldk lekèkku djus esa mi;ksxh gks ldrh gSA gqlSu] dqekj vkSj gqlSu ¼2008½ us lkoZtfud vkSj ljdkjh gkbZ Ldwy ds Nk=ksa ds chp 'kS{kf.kd ruko vkSj lexz lek;kstu ds Lrj dh [kkst dh vkSj nks pj 'kS{kf.kd ruko vkSj lek;kstu ds chp lacaèk ns[kus ds fy, ifj.kkeksa us ladsr fn;k fd ifCyd Ldwy ds Nk=ksa esa 'kS{kf.kd ruko dh ek=k dkQh vfèkd Fkh] tcfd ljdkjh Ldwy ds Nk= vius lek;kstu ds Lrj ds ekeys esa dkQh csgrj FksA gkyk¡fd] Nk=ksa ds lewg vkSj çR;sd çdkj ds Ldwy ds fy, 'kS{kf.kd ruko vkSj lek;kstu ds chp foijhr ysfdu egRoiw.kZ lacaèk ik, x,A flag vkSj mikè;k; ¼2008½ us dyst ds Nk=ksa ds chp mez vkSj fyax varj ds lanHkZ esa vdknfed ruko dh tk¡p dhA vè;;u dk uewuk çFke o"kZ vkSj r`rh; o"kZ ds iq#"k vkSj efgyk Nk=ksa ¼,u ¾ 400½ dk FkkA fu"d"kksZa ls irk pyk fd çFke o"kZ ds Nk=ksa us rhljs o"kZ ds Nk=ksa dh rqyuk esa mPp Lrj ds 'kS{kf.kd ruko dk vuqHko fd;kA lkFk gh

71%	MATCHING BLOCK 31/145	SA	PhD thesis monoj das.docx (D144733372)

efgyk Nk=ksa dks vius iq#"k led{k dh rqyuk esa vfèkd 'kS{

kf.kd ruko dk vuqHko gqvkA fo"ofo|ky; esa Hkkx ysuk dbZ Nk=ksa ds fy, ,d lq[kn vuqHko gSA fQj Hkh nwljksa ds fy, ;g O;kid vè;;u vkSj f'k{kk dh vko';drkvksa dks iwjk djus ds ncko ds vR;fèkd rukoiw.kZ le; dk çfrfufèkRo djrk gSA 'kS{kf.kd ruko fofHkUu çdkj ds udkjkRed ifj.kkeksa ls tqM+k gqvk gS tSls 'kkjhfjd chekjh vkSj fcxM+rk ekufld LokLF;A fgLVSM] bZn] yscxZ vkSj tulu ¼2009½ us vdknfed ruko vkSj LokLF; ds chp lacaèkksa dks cQj djus ds fy, O;fäRo dBksjrk dh {kerk dk irk yxk;kA ifj.kkeksa ls irk pyk fd

67 dBksjrk vdknfed ruko vkSj LokLF; f'kdk;rksa dh la[;k nksuksa ls udkjkRed :i ls tqM+h gqbZ Fkh] vkSj ;g fn[kk;k fd dBksjrk us vdknfed ruko vkSj LokLF; ds chp lacaèk dks fu;af=r fd;kA ysmax] ;sax vkSj oksax ¼2009½ us gkaxdkax esa çkFkfed Ldwy ds cPpksa ds 'kS{kf.kd ruko vkSj ekufld LokLF; ds chp lacaèk esa iSr`d leFkZu dh Hkwfedk dh tk¡p dhA bl ij ds vuqHkkxh; vè;;u ds çfrHkkxh 1]171 ik¡pos vkSj NBs xzsMj FksA ifj.kkeksa us ladsr fn;k fd vdknfed ruko ,d tksf[ke dkjd Fkk ftlus Nk=ksa dh fpark ds Lrj dks c>+k fn;k vkSj ekrk&firk dk HkkoukRed leFkZu ,d lqj{kkRed dkjd Fkk ftlus cPpksa ds csgrj ekufld LokLF; esa ;ksxnku fn;kA gkyk¡fd] mPp 'kS{kf.kd ruko ds le; esa cPpksa dks nh xbZ ekrk&firk dh lwpukRed lgk;rk Nk=ksa dh fpark ds Lrj dks c>+kus ds fy, çdV gqbZA eSfFkl vkSj yslh ¼1999½ us irk yxk;k fd D;k dBksjrk dk mi;ksx Nk=ksa ds ekeyksa ds is'ksojksa }kjk vdknfed] lkekftd] HkkoukRed vkSj yxko lek;kstu ds lkFk dfBukb;ksa okys Nk=ksa dh igpku djus ds fy, fd;k tk ldrk gSA ;g lq<ko fn;k x;k Fkk fd vè;;u dh 10&MCY;wds vofèk esa 'kkjhfjd LokLF; dh rqyuk esa dBksjrk ekufld LokLF; dk csgrj Hkfo";oäk FkkA isaxyh vkSj MkmM ¼2000½ us ruko vkSj volkn ds chp lacaèkksa ij lkekftd leFkZu] dBksjrk vkSj çfrc)rk] pqukSrh vkSj fu;a=.k ds dBksjrk iSekus ds ?kVdksa ds eè;e çHkkoksa dh tk¡p dhA ,d lkS ik¡p Lukrd Nk=ksa] vkSlr vk;q 20&21] us vè;;u esa Hkkx fy;kA csd fMçs'ku bUosaVjh ¼chMhvkbZ½ ds Ldksj ds lkFk dBksjrk] blds ?kVdksa vkSj leFkZu dk egRoiw.kZ lacaèk FkkA dBksjrk vkSj nks ?kVd ¼çfrc)rk vkSj fu;a=.k½ ruko ds lkFk egRoiw.kZ :i ls lg&laca/k FksA ruko dks volkn dk ,d egRoiw.kZ Hkfo";oäk ekuk x;kA ruko vkSj volkn ds chp lacaèkksa dks la;r djus ds fy, dBksjrk fn[kkbZ xbZA mPp dBksjrk okys O;fä;ksa dk chMhvkbZ ij muds Ldksj dh ijokg fd, fcuk leku Ldksj FkkA leFkZu ruko vkSj volkn ds chp lacaèk dks eMjsV djus ds fy, fn[kk;k x;k FkkA gUx dUx esa 245 phuh ekè;fed Nk=ksa ds ,d uewus esa dBksjrk] thou dh ?kVukvksa] eqdkcyk djus dh j.kuhfr;ksa vkSj euksoSKkfud ladV ds rhu ?kVdksa dk ewY;kadu fd;k x;k FkkA tcfd çfrc)rk] fu;a=.k vkSj pqukSrh Li"V :i ls vyx&vyx fuekZ.kksa ds :i esa vyx&vyx ugha Fks] bLrhQk nsus okyh Loh"fr] ludh fj;k;r vkSj O;kogkfjd vfHkfoU;kl ds :i esa O;k[;k fd, x, rhu vk;ke mHkjsA ruko&ladV lacaèk esa] dBksjrk us ruko ds lkFk 68 ckrphr ugha dh rkfd ladV ij blds çHkko dks fu;af=r fd;k tk lds(gkyk¡fd] dBksjrk vkSj ruko nksuksa dk ladV ij Lora= eq[; çHkko iM+kA gkyk¡fd] de esgurh Nk=ksa dh rqyuk esa mPp esgurh Nk=ksa us ldkjkRed ?kVukvksa dks vfèkd çHkko ds :i esa ewY;kadu ugha fd;k] mUgksaus ekuk fd udkjkRed ?kVukvksa dk çHkko de FkkA blds vykok] de gkMÊ Nk=ksa us mPp esgurh Nk=ksa ¼psu] 2000½ dh rqyuk esa dkQh vfèkd ckj fuf"Ø; vkSj cpus okyh eqdkcyk j.kuhfr;ksa dk mi;ksx djus dh lwpuk nhA xMZu ¼2001½ us vdknfed :i ls yphyk vkSj xSj&yphyk gkbZ Ldwy ds Nk=ksa ds çsjd iSVuZ dh rqyuk dhA rukoiw.kZ] vkfFkZd :i ls oafpr i`"BHkwfe dh fjiksVZ djus okys 36 nloha d{kk ds Nk=ksa dks xzsM lokbaV vkSlr ¼2-75$ dk thih,½ çklr djus ds vkèkkj ij yphyk ds :i esa oxÊ"r fd;k x;k FkkA fo"k;ksa us y{;ksa] Ldwy esa laKkukRed dk;ksZa ij çn'kZu] y{;ksa dks iwjk djus esa okrkoj.k dh çfrfØ;k ds ckjs esa fo”okl] miyfCèk ij O;fäxr fu;a=.k ls lacafèkr fo”okl] ikBîsrj xfrfofèk;ksa vkSj lkekftd lacaèkksa ls lacafèkr ç'ukoyh iwjh dhA ifj.kkeksa ls irk pyk fd yphyk fo"k;ksa ds dbZ y{; FksA mUgksaus xSj&yphys fo"k;ksa dh rqyuk esa mPp laKkukRed&{kerk] lkekftd {kerk vkSj i;kZoj.k leFkZu fo”oklksa dh lwpuk nhA lkFk gh yphyk fo"k;ksa us vfèkd ikBîsrj xfrfofèk;ksa esa Hkkx fy;kA v'kØQV ¼2002½ us ik;k fd O;fä dh dBksjrk Ldksj vkSj xf.kr dh fpark ds chp ,d udkjkRed lacaèk gSA nks fyaxksa esa dBksjrk dk fujh{k.k Hkh egRoiw.kZ ugha gS] ysfdu xf.kr dh fpark ds Ldksj us ladsr fn;k gS

100%	MATCHING BLOCK 32/145	SA	AMIT KUMAR THESIS(1).pdf (D123770339)

fd yM+fd;ksa us yM+dksa dh rqyuk esa

xf.kr dh fpark ds vfèkd Lrj dk vuqHko fd;k gS ¼xSjh] 2005½A eSMh] [kks'kkck] iflZdks] yw] gkoZs vkSj Cysdj ¼2002½ us lq<ko fn;k fd O;fäRo dBksjrk çfrc)rk] fu;a=.k vkSj pqukSrh ds ijLij lacafèkr „f"Vdks.kksa dk ,d la;kstu gS tks rukoiw.kZ ifjfLFkfr;ksa ds çcaèku dks detksj djus okys vuqHkoksa ds ctk; fodkl&mRçsj.k esa cny nsrk gSA mUgksaus nks vè;;uksa dh lwpuk nh vkSj igyk vè;;u feyu fDyfudy eYVh,fDl;y bUosaVjh vkSj feuslksVk eYVhQ+Sfld ilZuSfyVh bUosaVjh 2 ds dBksjrk vkSj fofHkUu iSekuksa ds chp lg&lacaèkh iSVuZ dks fuèkkZfjr djrk gSA nwljk vè;;u dBksjrk vkSj ik¡p&dkjd eMy ds chp lg&lacaèkh iSVuZ dh fpark djrk gS] tSlk fd Qkbo QSDVj bUosaVjh }kjk ekik tkrk gSA nksuksa vè;;uksa ds ifj.kkeksa us lq<ko fn;k fd dqy dBksjrk vkSj çfrc)rk] fu;a=.k vkSj pqukSrh ds ?kVdksa nksuksa us tksjnkj ekufld LokLF; dks O;ä fd;kA 69 dBksjrk O;fäRo dh ,d fo'ks"krk gS] ftls rukoiw.kZ ifjfLFkfr;ksa dh ek¡x esa lQy vkokl ds çklafxd dkjd ds :i esa ekuk tkrk gSA cexkVZuj ¼2002½ us eqdkcyk djus dh j.kuhfr;ksa ds pquko esa dBksjrk dh Hkwfedk dh tk¡p dhA ç'kkflr mik; lhvksihbZ bUosaVjh] ,lih,u,l bUosaVjh vkSj gkMÊusl bUosaVjh FksA eqdkcyk djus dh j.kuhfr;ksa dks rukoiw.kZ fLFkfr;ksa esa O;ogkj ds dqN Bksl fnup;kZ ds :i esa ns[kk x;kA ;s fnup;kZ rhu eq[; Jsf.k;ksa ifjgkj] Hkkouk&mUeq[k vkSj leL;k&mUeq[k eqdkcyk dk çfrfufèkRo djrh gSaA fo"k; 198 Lyksokfd;kbZ ekè;fed fo|ky; ds Nk= Fks ¼vkSlr vk;q 17-7 o"kZ½A ifj.kkeksa ls irk pyk fd dBksj yksxksa esa ?kVukvksa ds lfØ; lekèkku dks çkFkfedrk nsus dh ço`fÙk gksrh gS vkSj lkFk gh os ifjgkj dk çfrfufèkRo djus okyh fnup;kZ dks vLohdkj djrs gSaA csLdh] VsM vkSj tu ¼2003½ us laKkukRed dBksjrk vkSj lkekU; LokLF; vkSj euksoSKkfud dkedkt ds fy, eqdkcyk djus ds lacaèk esa çR;{k çHkko vkSj cQfjax eMy dk ijh{k.k fd;kA ifj.kkeksa ls irk pyk fd thou ruko vkSj euksoSKkfud LokLF; ds chp lacaèk dk çR;{k çHkko eMyA laKkukRed dBksjrk] eqdkcyk djus dh 'kSyh dk igyw vkSj udkjkRed thou dh ?kVukvksa us euksoSKkfud vkSj nSfgd ladV ds mik;ksa ij lhèks çHkko MkykA dbZ ekeyksa esa ,d cQfjax eMy ds fy, Hkh leFkZu Fkk ftllesa laKkukRed dBksjrk us euksoSKkfud ladV ij HkkoukRed eqdkcyk ;k çfrdwy thou dh ?kVukvksa ds çHkko dks fu;af=r fd;kA 'khMZ vkSj xksYch ¼2007½ us dBksjrk vkSj vdknfed

100%	MATCHING BLOCK 33/145	SA	PhD thesis monoj das.docx (D144733372)

miyfCèk ds chp lacaèk ij ,d vè;;u fd;kA mUgksaus

Nk=ksa ds nwljs 'kS{kf.kd o"kZ dh 'kq#vkr esa dBksjrk ls MsVk ,d= fd;k vkSj ckn esa muds 'kS{kf.kd çn'kZu dh fuxjkuh dhA fMxzh iwjk djus ij ifj.kkeksa ls irk pyk gS fd mPp dBksjrk okys Nk=ksa us dBksjrk ij de Nk=ksa dh rqyuk esa mPp vkSlr 'kksèk çcaèk vad çklr fd;k gS] vkSj blds vykok çfrc)rk igyw ij mPp Ldksj djus okys Nk=ksa dk mPp f}rh; o"kZ dk xzsM ibaV vkSlr ¼thih,½ FkkA nqcr] iqfu;k vkSj xks;y ¼2007½ us gSnjkckn vkSj fglkj ls ;k„fPNd :i ls nks Ldwyksa ¼,d lhch,lbZ vkSj ,d jkT; cksMZ f'k{kk½ dk p;u fd;k A p;fur 'kgjksa ds nksuksa lac) Ldwyksa ls 12oha d{kk ds 20&20 ds lHkh 80 Nk=ksa dks ;k„fPNd :i ls fy;k x;k FkkA ifj.kke bl ckr ij çdk'k Mkyrs gSa fd vfèkdka'k fd'kksj mÙkjnkrkvksa us eè;e ruko dk vuqHko fd;k]
70 ftlds ckn ikfjokfjd ruko] vgadkj dh èkedh] 'kksd] O;fäxr lsV cSd vkSj nwljksa ds LokLF; dh Jsf.k;ksa esa mPp Lrj dk ruko FkkA vfèkdka'k fd'kksjksa us eè;e ls fuEu Lrj dh udkjkRed eqdkcyk 'kSyh vkSj eè;e ls mPp Lrj dh ldkjkRed eqdkcyk 'kSyh viukbZA djheh vkSj osadVs'ku ¼2009½ us gkbZ Ldwy ds Nk=ksa esa xf.kr dh fpark] xf.kr ds çn'kZu vkSj vdknfed dBksjrk ij è;ku dsafær fd;kA uewus esa dukZVd jkT; ds 284 ¼144 iq#"k vkSj 140 efgyk,¡½ 10 oha d{kk ds gkbZ Ldwy ds Nk= 'kkfey FksA ifj.kkeksa ls irk pyk fd xf.kr dh fpark dk xf.kr ds çn'kZu ds lkFk egRoiw.kZ udkjkRed lacaèk gS ysfdu vdknfed dBksjrk ds lkFk dksbZ egRoiw.kZ lacaèk ugha ik;k x;k gSA ;g Hkh ns[kk x;k fd xf.kr dh fpark esa fyax varj egRoiw.kZ gSa] tcfd xf.kr ds çn'kZu vkSj 'kS{kf.kd dBksjrk

76%	MATCHING BLOCK 34/145	SA	SARITA HINDI VERSION.docx (D143553953)

esa yM+dksa vkSj yM+fd;ksa ds chp dksbZ egRoiw.kZ varj ugha ik;k x;

k
gSA bl vè;;u us bl rF; dks LFkkfir fd;k gS fd xf.kr esa Nk=ksa ds çn'kZu dks xf.kr dh fpark ls ekuk tk ldrk gS vkSj efgykvksa us bl pj ij FkksM+k vfèkd Ldksj fd;k gS ysfdu ;g lacaèk vdknfed dBksjrk ds lkFk ugha ns[kk x;k gSA de#íhu] vkfjl vkSj bczkfge ¼2009½ us ;g irk yxkus ds fy, tk¡p dh fd D;k lsesLVj ds vkjaHk] eè; vkSj var esa Nk=ksa ds chp dfFkr ruko ds Lrj esa dksbZ egRoiw.kZ varj gSA os ;g Hkh irk yxkrs gSa fd D;k muds 'kS{kf.kd çn'kZu ij rhu vyx&vyx vofèk;ksa ¼'kq#vkr] eè;] lsesLVj ds var½ esa Nk=ksa ds dfFkr ruko ds Lrj ds chp dksbZ lacaèk gSA ifj.kkeksa ls irk pyk fd Nk=ksa us ruko dk vuqHko fd;k ysfdu eè;e Lrj ijA lsesLVj dh 'kq#vkr vkSj eè; esa dfFkr ruko ds Lrj ds chp ,d egRoiw.kZ varj Fkk] ysfdu lsesLVj ds eè; vkSj var esa dfFkr ruko ds Lrj ds chp dksbZ egRoiw.kZ varj ugha FkkA blds vykok] Nk=ksa ds 'kS{kf.kd çn'kZu ds lkFk 'kq#vkr vkSj eè; lsesLVj esa dfFkr ruko ds Lrj ds chp dksbZ lacaèk ugha Fkk] ysfdu lsesLVj ds var esa dfFkr ruko ds Lrj vkSj Nk=ksa ds 'kS{kf.kd çn'kZu ds chp ,d egRoiw.kZ lacaèk FkkA miyfCèk ds mís';ksa esa miyfCèk dh vko';drk vkSj vlQyrk dk Hk; 'kkfey gSA ;s vfèkd çeq[k mís'; gSa tks gekjs O;ogkj dks ldkjkRed vkSj udkjkRed ifj.kkeksa dh vksj funZsf'kr djrs gSaA miyfCèk y{;ksa dks vfèkd Bksl laKkukRed vH;kosnu ds :i esa ns[kk tkrk gS tks O;fä;ksa dks ,d fof'k"V var dh vksj b'kkjk djrs gSaA bu miyfCèk y{;ksa ds rhu çdkj gSa %& ,d çn'kZu&„f"Vdks.k y{;] ,d çn'kZu&cpko y{;] vkSj ,d egkjr y{;A ,d çn'kZu& „f"Vdks.k y{; nwljksa ds lkis{k {kerk çklr djus ij dsafær gS] ,d
71 çn'kZu&ifjgkj y{; nwljksa ds lkis{k v{kerk ls cpus ij dsafær gS] vkSj ,d egkjr dk y{; Lo;a {kerk vkSj dk;Z egkjr ds fodkl ij dsafær gSA miyfCèk ds mís';ksa dks miyfCèk&çklafxd ifjfLFkfr;ksa ds çR;{k Hkfo";oäkvksa ds :i esa ns[kk tk ldrk gSA bl çdkj] miyfCèk mís';ksa dks ,d vçR;{k ;k nwjLFk çHkko dgk tkrk gS] vkSj miyfCèk y{;ksa dks miyfCèk çklafxd ifj.kkeksa ij çR;{k ;k lehiLFk çHkko dgk tkrk gS ¼bfy;V vkSj eSdxzsxj] 1999½A jcVZ vkSj fofy;e ¼1975½ us " miyfCèk çsj.kk : euksoSKkfud f'k{kk ds fy, ,d rdZlaxr „f"Vdks.k" uked ,d vè;;u fd;kA mUgksaus 54 fd'kksj fo|kfFkZ;ksa dks fo"k;ksa ds :i esa mi;ksx djrs gq,] euksoSKkfud f'k{kk ds miyfCèk çsj.kk çf'k{k.k ?kVd dh tk¡p dhA fo"k;ksa dks Lrjh"r fd;k x;k vkSj csrjrhc >ax ls fu;a=.k vkSj ç;ksxkRed lewgksa esa j[kk x;kA ijh{k.k dh fpark esa deh ds vykok] ç;ksxkRed çf'k{k.k dk;ZØe dk mís'; 'kS{kf.kd miyfCèk çsj.kk] fu;a=.k dh vkarfjd Hkkkoukvksa vkSj Ldwy ds çn'kZu esa o`f) djuk FkkA

100%	MATCHING BLOCK 35/145	SA	"सृजनात्मकता और आत्म-अवधारणा का दृटिबाधित और द ... (D141947618)

ifj.kkeksa ls irk pyk fd miyfCèk çsj.kk vkSj

fu;a=.k dh vkarfjd Hkkkoukvksa ij ç;ksxkRed vkSj fu;a=.k

65%	MATCHING BLOCK 36/145	SA	PhD thesis monoj das.docx (D144733372)

lewgksa ds chp egRoiw.kZ varj ekStwn FksA tkslsQ ¼1994½ us ekè;fed fo|ky; ds Nk= ds 'kS{kf.kd

çn'kZu ij çsj.kk vkSj fyax ds çHkko dh [kkst dh: 160 ukbthfj;kbZ ekè;fed Nk=ksa ds lewg esa 'kS{kf.kd miyfCèk çsj.kk vkSj vaxzsth Hkk"kk n{krk ds chp lacaèk dk vè;;u fd;k x;kA ifj.kkeksa ls irk pyk fd vdknfed çsj.kk ;k Hkk"kk n{krk ds lacaèk

62%	MATCHING BLOCK 38/145	SA	PhD thesis monoj das.docx (D144733372)

esa iq#"k vkSj efgyk Nk=ksa ds chp dksbZ egRoiw.kZ fyax varj ugha FkkA

gkyk¡fd] vaxzsth dh egkjr dk ldkjkRed :i ls Nk= çsj.kk ds Lrj ls tqM+k gqvk ik;k x;kA ;g iq#"k vkSj efgyk Nk=ksa ds fy, lp FkkA isdykLt vkSj oksMksiholh ¼1998½ us esVk&laKkukRed vkSj HkkokRed çfØ;kvksa vkSj xf.kr esa miyfCèk ds chp lacaèkksa dh tk¡p dhA xf.kr esa Nk= dh esVk&laKkukRed vkSj HkkokRed çfØ;kvksa dks ekius ds fy, ,d 39&vkbVe ç'ukoyh dk fuekZ.k fd;k x;k FkkA oLrqvksa ds dkjd fo'ys"k.k ls 4 vyx&vyx dkjdksa dk irk pykA 2 esVk&laKkukRed ¼1½ lh[kus dh j.kuhfr;k¡ vkSj ¼2½ xf.krh; leL;kvksa dks gy djuk] xf.krh; leL;kvksa dks gy djus esa è;ku vkSj 2 HkkokRed ¼1½ xf.kr ds Mj dk vuqHko djuk vkSj ¼2½ lQyrk dh Hkkouk vkSj xf.kr esa #fpA vkxs ds fo'ys"k.k us xf.kr dh miyfCèk vkSj xf.krh; leL;kvksa dks lh[kus vkSj gy djus dh j.kuhfr;ksa ds dkjdksa vkSj xf.kr esa Hk; dk vuqHko djus ds chp udkjkRed lg&lacaèk fn[kk;kA miyfCèk ds lkFk ldkjkRed lg&lacaèk fuEufyf[kr dkjdksa
72 ds lkFk ik, x,A xf.krh; leL;kvksa dks gy djus esa è;ku] vkSj lQyrk dh Hkkouk vkSj xf.kr esa #fpA OgkbV ¼1998½ us Nk=ksa dks vius Lo;a ds lh[kus ds fy, vfèkd ftEesnkj cuus ds fy, çsfjr djus ds fy, dbZ „f"Vdks.k rS;kj fd, gSa] ftUgsa jkT; ds ,d fo"ofo|ky; esa O;kolkf;d çeq[kksa ds fy, vko';d Lukrd Lrj ds ys[kkadu ikBîØeksa esa ykxw fd;k x;k gSA of.kZr „f"Vdks.kksa esa Vhe vkèkkfjr f'k{kk] ekSf[kd vkSj fyf[kr lapkj dkS'ky ij tksj nsus okys vlkbuesaV vkSj dsl fofèk 'kkfey gSA ;s „f"Vdks.k ikjaifjd rjhdksa ls çLFkku dk çfrfufèkRo djrs gSa ftlesa O;k[;ku] vH;kl vkSj laLej.k ds vkèkkj ij ys[kkadu fl[kk;k tkrk gSA ikjaifjd rjhdksa ls i>+k, tkus okys Nk=ksa ds çn'kZu dh rqyuk esa ijh{kk] VeZ çkstsDV vkSj d{kk Hkkxhnkjh }kjk ekik x;k Nk=ksa ds çn'kZu esa mYys[kuh; lqèkkj gqvkA MscSdj vkSj usYlu ¼2000½ us gkbZ Ldwy ds 242 Nk=ksa ds fyax] foKku oxZ ds çdkj ¼tSfod cuke 'kkjhfjd½ vkSj {kerk Lrj ds çsjd varj dh tk¡p dhA mPp miyfCèk vkSj HkkSfrd foKku ds Nk=ksa ds 'kS{kf.kd y{;ksa] foKku dks egRo nsus vkSj dfFkr {kerk ij de miyfCèk çklr djus okyksa vkSj tSfod foKku ds Nk=ksa dh rqyuk esa vfèkd vad FksA dfFkr {kerk vkSj foKku ds :f>+c) fopkjksa ij yM+fd;ksa dh rqyuk esa yM+dksa ds vad vfèkd FksA pj ds dsoy ,d mileqPp; ds fy, bu eq[; çHkkoksa dks miyfCèk&Lrj dh ckrphr dk mi;ksx djds oxZ çdkj }kjk fu;af=r fd;k x;k FkkA foxQhYM vkSj ck;UlZ ¼2000½ us fd'kksjksa ds fodkl ds nks çeq[k igyqvksa dk vè;;u fd;k: laKkukRed fodkl vkSj miyfCèk vkSj miyfCèk çsj.kk nksuksaA mUgksaus miyfCèk ds ekudh"r ijh{k.k ij Ldwy dh iw.kZrk vkSj lEekutud çn'kZu ds oÙkZeku iSVuZ dks la{ksi esa çLrqr fd;kA fQj mUgksaus Ldwy çsj.kk esa ldkjkRed vkSj udkjkRed mez ls lacafèkr ifjorZuksa dk lkjka'k fn;k vkSj ppkZ dh fd Ldwy esa vuqHko bu fodkl iSVuZ dks dSls le<k ldrk gSA ;g fu"d"kZ fudkyk x;k fd nksuksa fyax vkSj tkrh; lewg miyfCèk çsj.kk esa varj djrs gSa vkSj bu varjksa dks 'kS{kf.kd miyfCèk vkSj nh?kZdkfyd dSfj;j vkdka{kkvksa esa fyax vkSj tkrh; lewg ds varj ls tksM+rs gSaA ekè;fed Nk= dh miyfCèk vkSj d{kk esa çsj.kk dks çHkkfor djus okys dkjdksa dh igpku ,d egRoiw.kZ 'kSf{kd mís'; cuk gqvk gSA gSudd ¼2001½ us 61 mÙkj&ekè;fed Nk=ksa ¼vkSlr vk;q 13-2 o"kZ½ dh miyfCèk vkSj çsj.kk ij f'k{kkFkÊ fo'ks"krk] ijh{k.k fpark] vkSj d{kk pj] ewY;kadu ds [krjs ds var%fØ;kRed çHkkoksa
73 dh tk¡p dh] tks ;k„fPNd :i ls mPp&;k&fuEu&ewY;kadu [krjs dks lkSais x, FksA lkaf[;dh; :i ls egRoiw.kZ var%fØ;kvksa ls irk pyk fd lHkh Nk=ksa] fo'ks"k :i ls ijh{kk dks ysdj fpafrr Nk=ksa us [kjkc çn'kZu fd;k vkSj vR;fèkd ewY;kadu okyh d{kk ds laidZ esa vkus ij de çsfjr gq,A fiafVªp ¼2004½ us dyst dh d{kk esa Nk=ksa dks çsj.kk nsus vkSj lh[kus dks Lo&fofu;fer djus dk ,d oSpkfjd >k¡pk çLrqr fd;kA ;g >k¡pk Nk= ds lh[kus ds „f"Vdks.k ¼l,,y½ ds foijhr Nk= çsj.kk vkSj lh[kus ij ,d Lo&fu;ked lh[kus ¼l,lvkj,y½ ifjçs{; ij vkèkkfjr FkkA ,lvkj,y vkSj ,l,y „f"Vdks.k ds chp varj] vkSj dyst ds Nk= dh çsj.kk vkSj lh[kus dk vkdyu djus ds fy, fodkl'khy midj.kksa ds fy, ,lvkj,y oSpkfjd >k¡ps ds fufgrkFkZ ij ppkZ dh tkrh gSA :lsMZ vkSj xSjhlu ¼2004½ us cM+s vkSj o;Ld cPpksa ds lkFk çsj.kk vkSj 'kS{kf.kd lQyrk ds chp lacaèk LFkkfir fd;kA oÙkZeku vè;;u ds fu"d"kZ fiNys 'kksèk ds vuq:i Fks ftlesa mPp Lrj dh egkjr çsj.kk vkSj fu.kZ; çsj.kk mPp xf.kr vkSj xzsM ds lacaèk esa ik, x, FksA miyfCèk esa fyax varj ij gky ds 'kksèk esa eq[; :i ls yM+fd;ksa dh rqyuk esa yM+dksa ds de çn'kZu ij è;ku dsafær fd;k x;k gSA oSu gkSVs ¼2004½ us miyfCèk esa crk, x, fyax varj ds lacaèk esa vdknfed laL"fr ds O;k[;kRed ewY; dk ek=kRed ijh{k.k fd;kA ¶+ySaMlZ ¼csfYt;e½ ds 34 Ldwyksa ds ,d uewus esa ekè;fed

100%	MATCHING BLOCK 37/145	SA	"सृजनात्मकता और आत्म-अवधारणा का दृटिबाधित और द ... (D141947618)

f'k{kk ds rhljs vkSj pkSFks o"kZ esa

rhu gtkj lkr lkS lkB fo|kfFkZ;ksa dk vè;;u fd;k x;kA mPp f'k{kk ds fy, lkekU; rS;kjh djus

71%	MATCHING BLOCK 39/145	SA	AMIT KUMAR THESIS(1).pdf (D123770339)

okys Nk=ksa vkSj rduhdh vkSj O;kolkf;d f'k{kk çnku djus

okys Ldwyksa ds chp varj fd;k x;kA ;g çnf'kZr fd;k x;k Fkk fd yM+dksa dh laL"fr yM+fd;ksa dh laL"fr dh rqyuk esa de vè;;u mUeq[k Fkh vkSj bl varj dks de ls de lkekU; Ldwy esa miyfCèk esa fyax varj ds fy, ftEesnkj Bgjk;k tk ldrk gSA ,Muk] mekuk &Vsyj vkSj cekdk ¼2006½ us mu ?kVukvksa dh tkjp dh gS ftuls ekrkvksa] firk vkSj f'k{kdksa vkSj fd'kksjksa] nksLrksa us ykrhuh fd'kksjksa dh 'kS{kf.kd çsj.kk ¼154 yM+ds vkSj 156 yM+fd;kj½ dks çHkkfor fd;kA fu"d"kksZa ls ladsr feyrk gS fd ekrk vkSj f'k{kd 'kS{kf.kd leFkZu fd'kksj yM+fd;ksa dh 'kS{kf.kd çsj.kk ls ldkjkRed :i ls lacafèkr Fks] vkSj firk vkSj f'k{kd 'kS{kf.kd leFkZu fd'kksj yM+dksa ls ldkjkRed :i ls lacafèkr FksA
74 gsaMjlu&fdax vkSj fLeFk ¼2006½ us nks vè;;uksa dks fMtkbu fd;k rkfd ;g fuèkkZfjr fd;k tk lds fd Lukrd Nk=ksa us viuh f'k{kk ds fy, ftEesnkj Bgjk;k vkSj ;s vFkZ çklafxd euksoSKkfud fuekZ.k ls dSls lacafèkr gSa : vdknfed çsj.kk vkSj ewY;A nl vFkZ mHkjs dfj;j dh rS;kjh] Lora=rk] Hkfo"; ds fy, fn'kk,¡ [kkstuk] lh[kuk vkSj vkRe&fodkl] vxyk dne mBkuk] lkekftd lacaèk cukuk] nqfu;k dks cnyuk] ruko vkSj iyk;uA ckSf)drk vkSj vdknfed miyfCèk ds ewY;ksa us lh[kus] vkRe&fodkl vkSj nqfu;k dks cnyus dh ldkjkRed Hkfo";ok.kh dhA gkyk¡fd] vis{kkvksa ds foijhr] HkkSfrd fodkl dks egRo nsuk Hkh f'k{kk ds dbZ vFkksZa ds egRoiw.kZ Hkfo";oäk ds :i esa mHkjkA Jherh ds MOyw ¼2008½ us lkekftd ifjorZu ds vkèkkj ij dyst ds Nk=ksa }kjk çkIr miyfCèk çsj.kk ij fyax] vkfFkZd i`"BHkwfe vkSj tkfr varj ds çHkkoksa dh tkjp dhA 2Û3Û4 QSDVksfj;y fMtkbuksa dks viukdj vuqlaèkku dh ,d [kkstiw.kZ i)fr dks fu;ksftr fd;k x;k FkkA egkjk"Vª ds lkaxyh 'kgj ds fofHkUu dystksa ds ,d lkS ckucs ¼192½ Lukrd Nk=ksa dks ;k„fPNd uewuk çfØ;k }kjk pquk x;k FkkA ifj.kkeksa ls irk pyk fd vuqlwfpr tkfr vkSj ?kqearw tutkfr] vuqlwfpr tkfr vkSj vU; fiNM+h tkfr ds Nk=ksa vkSj

87%	MATCHING BLOCK 40/145	SA	PhD thesis monoj das.docx (D144733372)

iq#"k vkSj efgyk Nk=ksa ds chp egRoiw.kZ varj gSA

vxM+h tkfr vkSj vuqlwfpr tkfr lewg ds Nk= mPp miyfCèk çsj.kk okys gSa tcfd vU; fiNM+k vkSj ?kqearw tutkfr lewg ds Nk= vkSlr Lrj dh miyfCèk çsj.kk j[krs gSaA lkFk gh iq#"k Nk=ksa esa mPp miyfCèk çsj.kk gksrh gS tcfd efgyk Nk=ksa esa miyfCèk çsj.kk dk vkSlr Lrj uhps gksrk gSA ,Muk] ,fMª;kuk] esfyaMk] xksatkysl& cSdu vkSj dSFkjhu ¼2008½ us dgk fd D;k vdknfed çsj.kk us ykrhuh fd'kksjksa ¼,u ¾ 221½ ds chp ds lacaèk esa HksnHkko vkSj mudh 'kS{kf.kd lQyrk ds chp lacaèkksa dh eè;LFkrk dhA fyax dh laHkkfor eMjsfVax Hkwfedk dh Hkh tkjp dh xbZA lajpukRed lehdj.k eMfyax esa dbZ lewg fo'ys"k.k dk mi;ksx djrs gq,] fu"d"kksZa us ladsr fn;k fd oso 2 esa dfFkr HksnHkko us yM+dksa ds fy, osOl 2 vkSj 3 esa vdknfed çsj.kk dh dkQh Hkfo";ok.kh dh] ysfdu yM+fd;ksa ds fy, ughaA blds vfrfjä] yM+dksa ds fy,] vdknfed çsj.kk us dfFkr HksnHkko vkSj vdknfed lQyrk ds chp lacaèkksa esa egRoiw.kZ :i ls eè;LFkrk dhA fu"d"kZ ykrhuh yM+dksa dh 'kS{kf.kd lQyrk ds fy, HksnHkko ds nh?kZdkfyd çHkkoksa ij fopkj djus ds egRo dks js[kkafdr djrs gSaA blds vykok] fu"d"kksZa us fof'k"V 'kS{kf.kd ifj.kkeksa ¼tSls] 'kS{kf.kd lQyrk½ esa fyax varj dh ijh{kk ls vkxs c>+us dks çksRlkfgr fd;k vkSj bl ckr ij è;ku dsafær fd;k fd 'kS{kf.kd lQyrk dh vksj tkus okyh çfØ;k¡ fyax ds vuqlkj dSls fHkUu gksrh gSaA
75 ck;ju vkSj ¶yM ¼2009½ us ,d vk;fj'k fo"ofo|

100%	MATCHING BLOCK 42/145	SA	AMIT KUMAR THESIS(1).pdf (D123770339)

ky; esa çFke o"kZ ds ys[kk Nk=ksa

ds i`"BHkwfe pj vkSj vdknfed çn'kZu ds chp lacaèkksa dk vè;;u fd;kA mUgksaus ,d vk;fj'k fo"ofo|ky; esa ,d ys[kk dk;ZØe ds igys o"kZ esa iwoZ 'kS{kf.kd miyfCèk] ys[kkadu ds iwoZ Kku] fyax] mís';ksa] vis{kkvksa vkSj mPp f'k{kk ds fy, rS;kjh vkSj 'kS{kf.kd çn'kZu ds chp la?kksa dh tkjp dhA ,d ç'ukoyh dk mi;ksx djds i`"BHkwfe pj ds ckjs
esa MsVk ,d= fd;k x;k Fkk vkSj 'kS{kf.kd çn'kZu ds mik;ksa ds :i esa ijh{kk ds vadksa

100%	MATCHING BLOCK 41/145	SA	SARITA HINDI VERSION.docx (D143553953)

dk mi;ksx fd;k x;k FkkA ifj.kkeksa us

iwoZ 'kS{kf.kd miyfCèk] ys[kkadu ds iwoZ Kku vkSj Nk=ksa ds 'kS{kf.kd çn'kZu ds chp ,d egRoiw.kZ tqM+ko dk ladsr fn;kA blds vfrfjä] Nk=ksa ds vius dkS'ky vkSj {kerkvksa esa fo"okl] dSfj;j ds fodkl esa fo"ofo|ky; dh Hkwfedk ds ckjs esa èkkj.kk,¡] lh[kus ds ys[kkadu ds ldkjkRed iwoZ vuqHko] vkSj ckSf)d fodkl dk vuqHko djus dh bPNk lHkh igys o"kZ ds 'kS{kf.kd çn'kZu esa fHkUurk dks le<kus esa egRoiw.kZ pj gSaA fnypLi ckr ;g gS fd fo"ofo|ky; }kjk fdlh ds f{kfrt ¼mís';½ dks O;kid cukus dk volj vkSj O;k[;krkvksa ¼rS;kjh½ ls enn ek¡xus dh bPNk çn'kZu ds lkFk udkjkRed :i ls tqM+h gqbZ ikbZ xbZA ehjk] LVhou vkSj djkÅ ¼2009½ us dyst ds

71%	MATCHING BLOCK 43/145	SA	Rekha Uniyal synopsis (1).docx (D131751585)

Nk=ksa dh 'kS{kf.kd çsj.kk vkSj miyfCèk dh Hkfo";ok.kh

djus esa cM+s ik¡p O;fäRo y{k.kksa dh Hkwfedk dk irk yxk;kA dyst ds Nk=ksa ¼308 vaMjxzstq,V~l½ us Qkbo QSDVj bUosaVjh vkSj ,dsMfed eksfVos'ku Ldsy dks iwjk fd;k] vkSj vius dyst xzsM ibaV ,ojst ¼thih,½ dh lwpuk nhA ,d lg&lacaèk fo'ys"k.k us egRoiw.kZ lacaèkksa ds ,d fnypLi iSVuZ dk [kqyklk fd;kA blds vykok] çfrxeu fo'ys"k.k us ladsr fn;k fd drZO;fu"Bk vkSj [kqysiu us vkarfjd çsj.kk esa fHkUurk dk 17% le<k;k(drZO;fu"Bk vkSj viO;; us ckÁ çsj.kk esa 13% fHkUurk dh O;k[;k dh(vkSj drZO;fu"Bk vkSj lgerrk us çsj.kk esa 11% fHkUurk dh O;k[;k dhA blds vykok] pkj O;fäRo y{k.k ¼bZekunkjh] [kqysiu] fof{kIrrk] vkSj lgerrk½ us thih, esa 14% fHkUurk dh O;k[;k dh(vkSj phtksa dks iwjk djus ds fy, vkarfjd çsj.kk us thih, esa 5% fHkUurk dks le<k;kA var esa] drZO;fu"Bk vkarfjd çsj.kk dks iwjk djus vkSj thih, ds chp lacaèkksa ds vkaf'kd eè;LFk ds :i esa mHkjhA bu ifj.kkeksa dh O;k[;k bl lanHkZ esa dh tkrh gS fd f'k{kd Nk= çsj.kk vkSj miyfCèk dks çksRlkfgr vkSj iksf"kr djus ds fy, D;k dj ldrs gSaA fy;w vkSj <w ¼2009½ us 278 xzsM 2 lhfu;j gkbZ Ldwy ds Nk=ksa dh miyfCèk çsj.kk ij ,d tk¡p dhA 'kksèk ds ifj.kke crkrs gSa fd lkekU; lhfu;j gkbZ Ldwy ds Nk=ksa vkSj çeq[k lhfu;j gkbZ Ldwy

66%	MATCHING BLOCK 44/145	SA	SARITA HINDI VERSION.docx (D143553953)

ds Nk=ksa dh miyfCèk çsj.kkvksa ds chp dksbZ egRoiw.kZ varj ugha gSA gkbZ 76 Ldwy ds

ofj"B Nk=ksa dh miyfCèk çsj.kkvksa esa fyax esa egRoiw.kZ varj gksrk gS vkSj iq#"k Nk=ksa esa efgyk Nk=ksa dh rqyuk esa mPp miyfCèk çsj.kk gksrh gS(foKku vkSj dyk dk vè;;u djus okys Nk=ksa dh miyfCèk vfHkçsj.kkvksa esa egRoiw.kZ varj gS(lQyrk dk ihNk djus dh çsj.kk dk vlQyrk ls cpus dh çsj.kk ds lkFk udkjkRed lacaèk gSA Ldwy] fyax vkSj foKku çdkj esa miyfCèk çsj.kkvksa ij ijLij fØ;k ugha gksrh gSA yjsal ,aM Øksdj ¼2009½ us ldkjkRed vkSj udkjkRed :i ls Nk=ksa ds çn'kZu&y{; lsfVaXl dks vkRe&ewY; gkfu dh vdknfed vkdfLedrkvksa ij è;ku dsafær fd;kA mUgksaus miyfCèk çsj.kk vkSj LVhfj;ksVkbi [krjs ds fl)karksa dks ik;k] nksuksa us Hkfo";ok.kh dh Fkh fd tks Nk= f'k{kkfonksa ij vius vkRe&ewY; dks vkèkkj cukrs gSa] os {kerk ijh{k.kksa ij de çn'kZu djrs gSaA gkyk¡fd] iwoZ fl)kar dk dguk gS fd lkekU; :i ls Nk=ksa dks de çn'kZu dk tksf[ke gksrk gS] tcfd ckn okys dk dguk gS fd udkjkRed&:f>+oknh Nk=&ysfdu ldkjkRed&:f>+oknh Nk= ugha&tksf[ke de çn'kZu djrs gSaA oÙkZeku 'kksèk miyfCèk çsj.kk „f"Vdks.k dk leFkZu djrk gSA vè;;u 1 esa] ldkjkRed&:f>+oknh Nk=ksa us f'k{kkfonksa ij vkRe&ewY; ds vkèkkj ij çn'kZu&y{; fuèkkZj.k esa muds ijh{k.k ds çn'kZu dks ftruk [kjkc fd;k] mruk gh c>+ x;kA f'k{kkfonksa ij vkRe&ewY; vkSj lh[kus&y{; lsfVax esa çn'kZu ds chp dksbZ lacaèk ekStwn ugha FkkA vè;;u 2 us ldkjkRed vkSj udkjkRed :f>+c) Nk=ksa ds chp bls nksgjk;kA Nk= Lo&fu;eu vkSj çsj.kk esa xzsM Lrj] miyfCèk lewg vkSj xf.kr ikBîØe &çdkj ds varj dh tk¡p dhA miyfCèk lewg ds varj dk iSVuZ xf.kr ikBîØe ds çdkj esa fHkUu gksrk gS] D;ksafd Lo&fu;eu vkSj çsj.kk fu;fer xf.kr ikBîØeksa dh rqyuk esa mUur d{kkvksa esa vfèkd yxkrkj foHksfnr miyfCèk lewgksa dks lalkfèkr djrh gSA var esa] dk;Z #fp dks xf.kr lh[kus ds nkSjku Nk=ksa ds fu;ked j.kuhfr;ksa ds mi;ksx ds çkFkfed çsjd Hkfo";oäk ds :i esa fn[kk;k x;k FkkA miyfCèk ds çklafxd ifj.kkeksa ij O;fäxr miyfCèk y{;ksa vkSj d{kk y{; lajpukvksa ds la;qä çHkko dk vè;;u djus ds fy, ,d fo'ys"k.kkRed >k¡pk çnku fd;k A bl >k¡ps esa 3 eMy ¼çR;{k çHkko eMy] vçR;{k çHkko eMy vkSj baVjSD'ku çHkko eMy½ 'kkfey gSa] ftuesa ls çR;sd 2 y{; Lrjksa ds la;qä çHkko ds ,d vyx igyw dks lacksfèkr djrk gSA 47 d{kkvksa ds 1]578 tkikuh twfu;j gkbZ vkSj gkbZ Ldwy ds Nk=ksa ds uewus ds lkFk bu 3 eMyksa dh tk¡p dh xbZA ifj.kke 3 eMyksa esa ls çR;sd ds fy, leFkZu çnku djrs gSaAd{kk
77 y{; lajpuk,¡ u dsoy çR;{k Fkha] cfYd vkarfjd çsj.kk vkSj vdknfed vkRe&voèkkj.kk ds vçR;{k Hkfo";oäk Hkh Fks] vkSj O;fäxr miyfCèk y{;ksa vkSj d{kk y{; lajpukvksa ds chp dqN Øl&ysoy baVjSD'ku ns[ks x, Fks ¼nksuksa dks bafxr djrs gq,½ xksy eSp vkSj xksy csesy çHkko½A twfMFk vkSj lqlku ¼2009½ us fd'kksjkoLFkk esa 'kS{kf.kd vkRe&voèkkj.kkvksa] Ldwy esa miyfCèk vkSj {kerk lewgu ds lkFk lacaèk dh [kkst dhA vdknfed vkRe voèkkj.kk ds fo"k;&fof'k"V igyw lewg inkuqØe esa Nk=ksa dh fLFkfr ls lacafèkr Fks] mPp ;ksX;rk lewgksa esa Nk=ksa ds lkFk vaxzsth] xf.kr vkSj foKku esa de {kerk okys lewgksa ds Nk=ksa dh rqyuk esa dkQh vfèkd vkRe&voèkkj.kk,¡ FkhaA Hkfo"; esa lh[kus ds fy, Nk=ksa ds bjkns miyfCèk dh rqyuk esa vkRe&voèkkj.kk ls vfèkd çHkkfor FksA vkuan vkSj nsoh ¼2012½ us " dyst ds Nk=ksa ds chp vkRe&çHkkodkfjrk vkSj lgdeÊ lacaèkksa ds lacaèk esa '

78%	MATCHING BLOCK 45/145	SA	PhD thesis monoj das.docx (D144733372)

kS{kf.kd ruko" ij ,d vè;;u fd;kA mUgksaus ik;k fd

vdknfed ruko vkRe&çHkkodkfjrk vkSj lgdeÊ lacaèkksa ls dkQh udkjkRed :i ls lacafèkr FkkA Hkkjr ds xzkeh.k {ks= esa dyk] okf.kT; vkSj foKku twfu;j dyst ds Nk=ksa ds chp volkn] fpark vkSj ruko ij ,d vè;;u esa ik;k fd yM+dksa ,oa yM+fd;k¡ ds chp ruko esa varj gSA ckfoLdj ,V vy ¼2013½ esa ik;k x;k fd xzkeh.k {ks= ds Nk= volkn] fpark vkSj ruko dh pisV esa gSaA cVSusg ¼2013½ us Lukrd Nk=ksa ds chp vdknfed ruko

100%	MATCHING BLOCK 47/145	SA	AMIT KUMAR THESIS(1).pdf (D123770339)

ij ,d vè;;u fd;k vkSj ik;k fd

vdknfed vfèkHkkj] vè;;u ds fy, vi;kZIr le;] gj lsesLVj esa dke dk cks<] çsj.kk dk fuEu Lrj] vkSj mPp ikfjokfjd vis{kk,¡ Nk=ksa ds chp ruko ds fy, çeq[k çsjd 'kfä FkhaA dqekjh vkSj tSu ¼2014½ us dyst ds Nk=ksa ds chp ijh{kk ds ruko vkSj fofHkUu fparkvksa ds chp lacaèk crk;kA delZ LVªhe ds Nk=ksa dh rqyuk esa vkV~lZ LVªhe ds Nk=ksa esa ijh{kk ds nkSjku lcls vfèkd ruko vkSj fpark ikbZ xbZA fd'kksjksa esa volkn ij fyax vkSj èkkjk ds çHkko ij ,d vè;;u esaA
78 'kekZ ¼2014½ us ik;k fd fd'kksjksa esa volkn ij fyax vkSj èkkjk dk egRoiw.kZ çHkko iM+rk gSA yM+fd;ksa us yM+dksa dh rqyuk esa mPp Lrj dk volkn fn[kk;k] vkSj dyk ds Nk= foKku vkSj okf.kT; ds Nk=ksa dh rqyuk esa vfèkd mnkl FksA Vhuk vkSj vUu;r ¼2014½ us fd'kksjksa dh 'kSf{kd #fp ds lacaèk esa 'kSf{kd fpark fo"k; ij ,d vè;;u fd;k vkSj LFkkfir fd;k fd fd'kksj

80%	MATCHING BLOCK 49/145	SA	PhD thesis monoj das.docx (D144733372)

yM+dksa vkSj yM+fd;ksa ds chp 'kS{kf.kd fpark ds

Lrj esa egRoiw.kZ varj ekStwn gSA >qy vkSj dqekjh ¼2015½ us " fyax ds lacaèk esa fd'kksjksa esa 'kS{kf.kd ruko" fo"k;

50%	MATCHING BLOCK 46/145	SA	Anamika Tiwari Thesis.pdf (D144837136)

ij ,d vè;;u fd;kA ifj.kkeksa us ladsr fn;k fd] iq#"k vkSj efgyk fd'kksjksa ds 'kS{kf.kd ruko ds chp egRoiw.kZ varj gSA

efgyk fd'kksfj;ksa dks muds iq#"k led{kksa dh rqyuk esa vfèkd 'kS{kf.kd ruko esa ik;k x;kA dkSj vkSj dkSj ¼2016½ us " fd'kksj Nk=ksa dh HkkoukRed fLFkjrk ds lacaèk esa 'kS{kf.kd ruko" fo"k;

87%	MATCHING BLOCK 48/145	SA	Anamika Tiwari Thesis.pdf (D144837136)

ij ,d vè;;u fd;kA ifj.kkeksa ls irk pyk fd

fyax ds lacaèk esa vdknfed ruko ¼vdknfed fujk'kk] vdknfed la?k"kZ vkSj vdknfed fpark½ ds chp dksbZ cM+k varj ugha gS ysfdu vdknfed ncko us yM+dksa vkSj yM+fd;ksa ds chp vius Lrjksa esa egRoiw.kZ varj fn[kk;kA yM+dksa ds led{kksa dh rqyuk esa yM+fd;ksa dks vdknfed ncko esa vfèkd ik;k x;kA ?kks"k ¼2016½ ds vuqlkj futh Ldwyksa ds Nk=ksa esa ljdkjh Ldwyksa esa muds led{kksa dh rqyuk esa vfèkd 'kS{kf.kd ruko gksrk
gSA

87%	MATCHING BLOCK 50/145	SA	AMIT KUMAR THESIS(1).pdf (D123770339)

efgyk Nk=ksa us iq#"k Nk=ksa dh rqyuk esa mPp

Lrj ds 'kS{kf.kd ruko dk vuqHko fd;kA ruko dks vc thou 'kSyh ladV ¼ elhg vkSj xqyjst+] 2006½ ds :i esa le<k tkrk gS] tks fdlh Hkh O;fä dks muds fodklkRed pj.k ¼ cutÊ vkSj pVtÊ] 2016½ dh ijokg fd, fcuk çHkkfor djrk gSA Nk=ksa ls dsoy ,d gh dk;Z djus dh vis{kk dh tkrh Fkh] og Fkk vè;;u djuk vkSj vè;;u dks dHkh Hkh rukoiw.kZ ugha ekuk tkrk FkkA ekrk&firk dh vius cPpksa ds fy, vis{kk,¡ rukoiw.kZ lkfcr gqbZa] tks cnys esa mu cM+s cks<ksa esa cny xbZa ftUgsa ;s cPps vc vkSj ugha mBk ldrsA jk"Vªh; vijkèk fjdMZ C;wjks }kjk çdkf'kr vka¡dM+ksa ds vuqlkj] gj ?kaVs ,d Nk= vkRegR;k djrk gS ¼ lkgk] 2017½A C;wjks us 1-8 izfr"kr Nk=ksa dks iath"r fd;k ftUgksaus ijh{kkvksa esa

79 vlQy gksus ds dkj.k vkRegR;k dh vkSj ,d o"kZ dh le; lhek ds nkSjku vkRegR;k dh nj esa 80% dh o`f) gqbZA 2012 dh ySalsV fjiksVZ us ;g Hkh m)r fd;k fd Hkkjr esa 15&29 vk;q oxZ ds oxZ esa vkRegR;k dh nj nqfu;k esa lcls vfèkd gS ¼tSlk fd Hkkjr esa lcls vfèkd vkRegR;k nj gS½ vkSj ;s la[;k fxjus dk dksbZ ladsr ugha fn[kkrh gSA bu [krjukd vka¡dM+ksa ds çkFkfed dkj.k ds :i esa vdknfed ruko dh igpku dh xbZ gSA yh ,aM yklZu ¼2000½ bl ruko dks i;kZoj.kh; rukoksa] Nk= ds ewY;kadu vkSj mlh ds fy, çfrfØ;kvksa ds chp ckrphr ds :i esa le<krs gSaA ;g vc ,d xaHkhj okLrfodrk cu xbZ gS ftls dfj;j LVij dgk tkrk gS ¼ dMkiêh vkSj fot;y{eh] 2012½A blfy,] ;g fpark dk ,d egRoiw.kZ dkj.k cu tkrk gS D;ksafd ;g Hkkjr esa c>+rh ekufld LokLF; fparkvksa dk y{k.k gS ¼ uknkeqjh vkSj lh] 2011 ½A LVªksMy ,aM lu] 2015(oekZ] 'kekZ vkSj yklZu] 2002 ds lkFk Nk=ksa esa fjiksVZ dh xbZ dbZ leL;kvksa esa ls volkn] fpark] O;ogkj lacaèkh leL;k,¡] fpM+fpM+kiu vkfn dqN leL;k,¡ gSaA rukoiw.kZ fLFkfr;ksa esa volkn dh ?kVuk,¡ Hkh ikbZ xbZaA fd'kksjksa ds :i esa ;g è;ku dsafær djus esa vleFkZrk] foQyrk ds Mj] Hkfo"; ds udkjkRed ewY;kadu vkfn ls tqM+k gqvk gS ¼cqlkjh] 2012½A fd'kksjksa dks fofHkUu tksf[ke Hkjs O;ogkjksa esa fylr gksus dh Hkh lwpuk feyh Fkh] tSls 'kjkc vkSj u'khyh nokvksa dh c>+rh [kir] vlqjf{kr ;kSu xfrfofèk;k¡] 'kkjhfjd fuf"Ø;rk] [kjkc [kkus vkSj lksus ds iSVuZ ¼vesfjdu dyst gsYFk ,lksfl,'ku] 2009(csusV ,aM gksyksos] 2014(fdax] fonkSjsd vkSj flag] 2014½A çn'kZu djus ds fy, bu Nk=ksa dk ncko bruk xaHkhj gS fd vkRegR;k ds ç;klksa esa ik¡p xquk o`f) gqbZ gSA ;g le<uk Hkh vfuok;Z gks tkrk gS fd de ruko ;g lqfuf'pr ugha djrk gS fd Nk= csgrj çn'kZu djsaxs] ysfdu okLro esa bu ifjfLFkfr;ksa esa] os dk;Z dks pqukSrhiw.kZ ekusaxs vkSj vklkuh ls Åc Hkh ldrs gSa ¼mfpy] 2017½A gkyk¡fd ruko ds dqN Lrj Nk=ksa dks b"Vre çn'kZu dh vksj èkdsyrs gSa] tc ruko ls fuiVus ds fy, vi;kZIr lalkèkuksa ds dkj.k bls dq'kyrk ls çcafèkr ugha fd;k tkrk gS] rks blds Nk= vkSj laLFkku ds fy, fujk'kktud ifj.kke gks ldrs gSaA fVªxj ds dkj.k dh ijokg fd, fcuk çR;sd O;fä }kjk çklr ruko çfrfØ;k leku gksrh gSA mnkgj.k ds fy,] oSokfgd ruko] ijh{kk dh fpark] dke dk ruko vkfn 'kjhj ls leku
80 'kkjhfjd çfrfØ;k,¡ çklr djsaxsA ;g eq[; :i ls ,Mªsuks&esMqyjh flLVe ds dkj.k gksrk gS] tks gekjs raf=dk ra= vkSj ,MªsuksdksfVZdy v{k ¼cuZ ,aM ;kjks'k] 2003½ ds lgkuqHkwfr foHkktu dk fgLlk gS] ftlds ifj.kkeLo:i " yM+kbZ ;k mM+ku" çfrfØ;k gksrh gSA 'kjhj esa ns[ks tk ldus okys dqN 'kkjhfjd ifjorZu ân; xfr ¼ ,pvkj½] jäpki ¼chih½] "olu nj] dadky dh ekalisf'k;ksa dh vksj jä ds çokg esa o`f) vkfn gSaA tcfd ruko çfrfØ;k leku gks ldrh gS] O;fä;ksa }kjk crk, x, ruko ds lzksr vyx&vyx gksrs gSaA bu varjksa dks ruko ds dkj.kksa] lzksrksa vkSj ifj.kkeksa esa ns[kk tk,xkA ,d vdknfed lsfVax esa fjiksVZ fd, x, dqN lkekU; rukoksa esa vR;fèkd vlkbuesaV] [kjkc le; çcaèku vkSj lkekftd dkS'ky] lgdeÊ çfrLièkkZ vkfn 'kkfey gSa ¼ Qs;jcznj ,aM okuZ] 2003½A ;s ifj.kke Hkkjr esa fd, x, vè;;uksa ds lkFk&lkFk Jhjkekjsìh] 'kadj] chuw] eqdksikè;k;] js ,aM esustsl ¼2007½ }kjk fjiksVZ fd, x, vè;;uksa ds vuq:i gSaA vU; O;fäxr fof'k"V dkjdksa esa foÙkh; çcaèku esa leL;k,¡] jgus ds ekgkSy esa cnyko] O;fäxr vkSj 'kS{kf.kd thou ds çcaèku esa dfBukb;k¡ vkfn 'kkfey gSaA ¼ck;ju] C:u ,aM bolZ] 2008(psukZsekl vkSj 'kkfijks] 2013(xksQ] 2011(ftesust+] ufo;k &vkslksfj;ks vkSj fM;kt+] 2010(eksLdkfjVksyks] 2009½A 'kSf{kd ç.kkyh Hkh ckn esa Nk=ksa }kjk vuqHko fd, tkus okys ruko ds Lrj dks c>+kus ds fy, ,d l{ke Hkwfedk fuHkkrh gSA dqN lzksrksa esa HkhM+HkkM+ okys O;k[;ku d{k] lsesLVj xzsfMax flLVe] vi;kZIr lalkèku vkSj lqfoèkk,¡ ¼vksfoax ,aM vxksyk] 2008½] ikBîØe dh fo'kkyrk ¼ vxzoky vkSj pkgj] 2007(Jhjkekjsìh ,V vy] 2007½] yacs ?kaVs vkSj jVus dh mEehnsa 'kkfey gSaA ¼nsc ,V vy] 2015½A ekrk&firk vkSj laLFkku yxkrkj vlQyrk dk Mj iSnk djrs gSa tks muds vkRelEeku vkSj vkRefo"okl dks çHkkfor djrk gSA ,ax ,aM gqvku ¼2006½] us ruko ds Lrj esa o`f) ds fy, ftEesnkj dkjdksa esa ls ,d ds :i esa c>+h gqbZ vis{kkvksa dh lwpuk nhA 'kSUV~t+ vkSj duj; ¼2009½ us ;ksX;rk dh [kkst ds nkSjku miyfCèk çsj.kk vkSj varj&O;fäxr HkkokRed ifjorZu'khyrk dh [kkst dh% ,d cgqLrjh; MsVk lajpuk ds :i esa xksYQ ds vkliklA lfp= ifj.kkeksa ls irk pyk gS fd miyfCèk çsj.kk esa O;fäxr varj
81 l{kerk dh [kkst ds nkSjku çHkko] vuqHkwfr vkSj O;ogkj dh ,d ,dh"r ç.kkyh dk ,d fgLlk gSA 'kksukyh ¼2010½ us f'keyk esa nks lkS ¼116 efgyk,¡ vkSj 84 iq#"k] vkSlr vk;q ¾ 19-72 vkSj 19-84 o"kZ Øe'k%½ dyst ds Nk=ksa dh vdknfed vkRe&çHkkodkfjrk dh 'kq#vkr dh A Nk= dh 'kS{kf.kd miyfCèk ij c>+rk tksj Nk=ksa ij mR""Vrk ds fy, ncko Mkyrk gSA ifj.kkeksa ls irk pyk fd vkRe&çHkkodkfjrk us Nk= dh leL;k lqy<kus dh {kerk dks c>+k;kA blus ruko ds çHkkoksa dks Hkh fu;af=r fd;kA çn'kZu dks rhu vyx&vyx rjhdksa ls ekik x;k] ¼v½ leL;k lqy<kus dh {kerk] ¼c½ vdknfed miyfCèk] vkSj ¼l½ d{kk ijh{k.kA ifj.kke crkrs gSa fd gkyk¡fd ruko rhuksa ijh{k.k fLFkfr;ksa esa [kjkc çn'kZu dk ,d vxznwr Fkk] ,d eqdkcyk ra= ds :i esa vkRe&çHkkodkfjrk dk 'kS{kf.kd miyfCèk ;k d{kk ijh{k.kksa dh rqyuk esa leL;k lekèkku {kerk esa lqèkkj ij lcls etcwr çHkko FkkA iq#"kksa us eq[; :i ls lekèkku ij efgykvksa ls csgrj çn'kZu fd;k] vfèkd vkRe&çHkkodkfjrk vkSj rqyukRed :i ls de ruko fn[kk;kA ;g vè;;u crkrk gS fd vkt dk ;qok mR""Vrk çklr djuk pkgrk gS vkSj fdlh Hkh dher ij ,d is'ksoj fMxzh çklr djuk pkgrk gS vkSj blfy, cgqr de mez esa vkRefuHkZj cuuk pkgrk gSA lhek vYrkQ vkSj g¶lk dkSlj ¼ 2013&15½ us Nk=ksa ds çn'kZu ij vdknfed ruko ds çHkko vkSj fyax] vk;q vkSj 'kSf{kd Lrj tSls tulkaf[;dh; pj ds çHkko dk irk yxk;kA mUgksaus Nk= ds çn'kZu ij vdknfed ruko ds egRoiw.kZ çHkko dk fo'ys"k.k fd;kA iflZOM LVªsl Ldsy ¼ih,l,l½ ds Ldksj ij iq#"k vkSj efgyk fo"ofo|ky; ds Nk=ksa ds chp ,d xSj&egRoiw.kZ varj FkkA iflZOM LVªsl Ldsy ih,l,l ij twfu;j vkSj lhfu;j Nk=ksa ds chp egRoiw.kZ varj ik;k x;kA iqjkus Nk=ksa dh rqyuk esa ;qok Nk=ksa esa 'kS{kf.kd ruko vfèkd ik;k x;kA jsìh ,V vy ¼2018½ us vius vè;;u esa fu"d"kZ fudkyk gS fd Nk=ksa esa ruko esa èkkjk&okj varj ekStwn gSA O;fäxr] lkekftd vkSj laLFkkxr Lrj ij ruko ls fuiVuk egRoiw.kZ gSA çfrfØ;k] ;ksx] thou dkS'ky çf'k{k.k] fnekxhiu] è;ku vkSj euksfpfdRlk tSls mipkj ruko ls fuiVus ds fy, mi;ksxh ik, x, gSaA ruko ds eq[; dkj.k dh igpku djuk blls fuiVus dh dqath gSA is'ksoj ruko ls fuiVus ds fy, fo'ks"k j.kuhfr fodflr dj ldrs gSaA Nk=ksa dh ,dh"r HkykbZ u dsoy O;fä ds fy, cfYd laLFkku ds fy, Hkh egRoiw.kZ gSA

82 fy;w okbZ] vkSj yw tsM ¼2011½] phuh gkbZ Ldwy ds Nk= ds 'kS{kf.kd ruko vkSj volknxzLrrk ds y{k.kksa ij fd, x, ,d vè;;u eè;LFk ds :i esa fyax vkSj Ldwy ds ekgkSy ls irk pyk gS fd ftu yM+fd;ksa ;k Nk=ksa ds ikl mPp Lrj dh miyfCèk vfHkfoU;kl Fkk] muds igys LFkku ij gksus dh vfèkd laHkkouk FkhA milewg fu"d"kksZa us lq<ko fn;k fd Ldwy ds ekgkSy ds ckjs esa fyax vkSj 75 Nk=ksa dh èkkj.kk phuh gkbZ Ldwy ds Nk=ksa ds 'kS{kf.kd ruko vkSj muds volknxzLr y{k.kksa ds chp lacaèkksa dks fu;af=r dj ldrh gSA lk;ifu'k ¼2003&14½ us ik;k fd ruko lh[kus vkSj ;knnk'r dks udkjkRed :i ls çHkkfor djrk gSAvyx&vyx yksxksa ds fy, fons'k esa vè;;u djus dk vuqHko mu ij çHkko Mkyus okys dkjdksa ds lanHkZ esa vyx&vyx gks ldrk gSA bl çdkj] fiNys 'kksèk esa fjiksVZ fd, x, fu"d"kZ dHkh&dHkh vlaxr gksrs gSaA varjjk"Vªh; Nk=ksa }kjk lkeuk fd, tkus okys lHkh lkekU; rukoksa ij Åij ppkZ dh xbZ gS(fQj Hkh] ruko dk Lrj vkSj blds çfr Nk= dh çfrfØ;k O;fä ds vkèkkj ij fHkUu gks ldrh gSA bl çdkj] isij dk ;g [kaM varjjk"Vªh; Nk=ksa ds chp eq[; O;fäxr erHksnksa dh ppkZ çLrqr djsxk tks mudh 'kS{kf.kd lQyrk vkSj lkaL"frd vuqdwyu ij çHkko Mkyrs gSaA vkseksfe;k ,V vy] ¼2014&17½ vkseksfe;k ,V vy ds vuqlkj] ruko esa Nk= Fkdk gqvk] chekj vkSj è;ku dsafær djus ;k Li"V :i ls lkspus esa vleFkZ gks ldrk gSA bl vè;;u us ykxksl jkT; ds f'k{kk ftyk esa tho foKku ds Nk=ksa dh 'kS{kf.kd miyfCèk;ksa ij ruko ds dfFkr çHkko dh tk¡p dhA mi;ksx dh xbZ 'kksèk fMtkbu o.kZukRed loZs{k.k fMtkbu i)fr gSA dqN fu"d"kZ ;g gSa fd Nk= 'kCn ds var esa lcls vfèkd ruko dk vuqHko djrs gSa vkSj Nk= ruko dks vdknfed miyfCèk ij udkjkRed çHkko ds :i esa ns[krs gSaA ;g vuq'kalk dh xbZ Fkh fd f'k{kdksa dks vius dke dks i;kZIr :i ls xfr nsuk pkfg, rkfd Nk=ksa dks dk;Zdky ds var esa tYnh u djsaA lkFk gh Nk=ksa dks ruko çcaèku dkS'ky fl[kk;k tkuk pkfg,A 'kekZ ,V vy ¼2016½ us vius vè;;u esa ruko ij vadq'k yxkus ds fy, fofHkUu rjhdksa ds bLrseky dks crk;kA jkstkuk ,d 'kkjhfjd O;k;ke djus ls ruko dh fpark nwj gks ldrh gSA dksbZ Hkh fofHkUu le; çcaèku midj.kksa dks viuk ldrk gS vkSj vodk'k xfrfofèk;ksa esa 'kkfey gks ldrk gS ftlls Nk=ksa dks ykHk gks ldrk gSA lkFk gh] ;g Hkh lq<ko fn;k x;k fd ruko dks de djus ds fy, dystksa esa ,d vuqdwy ekgkSy gksuk pkfg,A f'k{kdksa dh

83 vksj ls fMyhojh dh 'kSyh esa cnyko vkSj esaVj çnku djus ls f'k{k.k 'kSyh esa rkth gok vk ldrh gSA pkot; vkSj Ldksjksusd ¼2008½ ds lkFk larqf"V lfgr de lkaL"frd ruko esa ;ksxnku djrs gSa A mnkgj.k ds fy,] Hkkjrh; Nk=ksa us la;qä jkT; vesfjdk esa jgus ds fy, lek;kstu djrs le; phuh Nk=ksa dh rqyuk esa de lkaL"frd ruko fn[kk;k] 'kk;n blfy, fd os if'peh laL"fr vkSj lekt ds lkFk vke rkSj ij etcwr vaxzsth Hkk"kk {kerkvksa ¼dsth jkbl] pksbZ] <kax] eksjsjks] vkSj½ ds dkj.k vfèkd ifjfpr gSa¼,aMjlu] 2012½A blds vykok] [oktk vkSj MsEilh ¼2008½ us ik;k fd Nk=ksa dh vkRe &èkkj.kk vkSj fo"ofo|ky; ds i;kZoj.k dh vis{kkvksa us varjjk"Vªh; vè;;u ds fy, ,d estcku laL"fr ds fy, muds lek;kstu ij egRoiw.kZ çHkko MkykA vdsykiu [kjkc lek;kstu] vaxzsth Hkk"kk n{krk ds fuEu Lrj ;k dfFkr HksnHkko dk ifj.kke gks ldrk gS(gkyk¡fd] varjjk"Vªh; Nk= vyx&Fkyx ;k vdsys eglwl djus dk eq[; dkj.k ;g gS fd os vius ifjokj vkSj@;k nksLrksa ls nwj gSaA vxj dqN yksxksa dks vius ns'k esa u, nksLr cukuk eqf'dy yxrk gS] rks fons'k esa jgus ij ,slk djuk vkSj Hkh eqf'dy gks ldrk gSA dqN vè;;uksa us vdsysiu dks lkaL"frd nwjh] de vaxzsth Hkk"kk n{krk vkSj@;k jk"Vªh;rk ds lkFk tksM+k gSA mnkgj.k ds fy,] dbZ phuh Nk=ksa us ;wds esa vius igys lsesLVj ¼cSjksu] ce vkSj duos] 2007½ ds nkSjku vdsysiu vkSj gksfedusl dks ,d fpark ds :i esa crk;kA vkerkSj ij ;g ik;k x;k gS fd de mez ds Nk=ksa us iqjkus Nk=ksa dh rqyuk esa mPp Lrj ds ruko vkSj volkn dh lwpuk nhA ;g efyuØksM~V vkSj ysvksax ¼1992½ vkSj jkslsUFky ,V vy }kjk Hkh çnf'kZr fd;k x;k gS ¼2008½A os efgyk Nk= iq#"k Nk=ksa dh rqyuk esa dkQh vfèkd mnkl vkSj fpafrr FkhaA blds vykok] iq#"k vkSj efgyk varjkZ"Vªh; Nk=ksa esa ruko ¼èkweziku vkSj 'kjkc dh [kir½ dh çfrfØ;k esa muds LokLF; tksf[ke O;ogkj esa dkQh varj Fkk] iq#"kksa dh rqyuk esa de efgykvksa us ladsr fn;k fd os èkweziku djrs gSa ¼fdlh Hkh la[;k esa flxjsV ds oÙkZeku mi;ksx ds :i esa ifjHkkf"kr½ ;k eknd is; dk lsou djrs gSa ¼ fiNys llrkg ds Hkhrj ,d is; Fkk½A nks vè;;uksa us rukoiw.kZ ?kVukvksa ds fy, ,d eqdkcyk j.kuhfr ds :i esa èkeZ dh tk¡p dhA

84 fo'ks"k :i ls] xkMZuj] Øsxsyksg] vkSj gsfuax ¼2014½ vkSj lw ,V vy ¼2009½us ik;k fd lkekU; :i ls lkaL"frd ruko vkSj dfFkr ruko ds tokc esa èkeZ@vkè;kfRedrk varjjk"Vªh; Nk=ksa ds fy, ,d eqdkcyk ra= ds :i esa dk;Z dj ldrh gSA gkyk¡fd] varjjk"Vªh; eqfLye Nk=ksa ds chp èkkfeZd eqdkcyk j.kuhfr;ksa dk mi;ksx muds u, okrkoj.k ds vuqdwy gksus ds dkj.k le; ds lkFk de gks ldrk gSA dqy feykdj] vuqlaèkku ¼tSls] dULVsaVkbu ,V vy] 2004(yh ,V vy] 2004(rqax] 2011(osbZ ,V vy] 2007½ us varjjk"Vªh; Nk=ksa }kjk vuqHko dh xbZ ekufld LokLF; leL;kvksa dh la[;k dks fn[kk;k gS ¼tSls volkn½ lacafèkr gS ruko ls fuiVus dh mudh {kerk ds fy,A fljkt ,V vy] ¼2014 ½ us 22esfMdy Nk=ksa esa ruko ds Lrj vkSj vdknfed çn'kZu ds chp lacaèk dh tk¡p dhA mUgksaus ik;k fd mPp vkSj xaHkhj ruko Lrj okys mÙkjnkrkvksa us mPp xzsM fcanq vkSlr ¼lhthih,½ Ldksj fd;kA Nk= ruko dk çHkkoh >ax ls lkeuk djus esa l{ke Fks(ruko dk udkjkRed çHkko muds 'kS{kf.kd çn'kZu dks çHkkfor ugha dj ldkA osu] psax ¼2009½ }kjk fd, x, ,d vè;;u esa crk;k x;k gS fd fd'kksjkoLFkk esa 'kkjhfjd ifjorZu ds dkj.k Nk=ksa esa dbZ euksoSKkfud leL;k,¡ iSnk gksrh gSaA 'kkjhfjd dkjd] ikfjokfjd dkjd] Ldwy dkjd] lacaèk dkjd vkSj lkekftd dkjd ruko ds eq[; lzksr gSaA jsE;k vkSj ikFkZlkjFkh ¼2009½ }kjk twfu;j dyst ds Nk=ksa ds eqdkcyk djus ds iSVuZ ij fd, x, vè;;u esa ik;k x;k fd le; dh fpark] vlQyrk dk Mj] d{kk dh ckrphr vkSj vkfFkZd eqís Nk=ksa esa ruko ds dqN 'kS{kf.kd dkjd gSa A blds vykok bu dkjdksa] vius cPpksa ij ekrk&firk dh vlhfer vis{kk,¡ Hkh Nk=ksa dks ruko esa Mkyrh gSaA bl ruko ds çHkko ls HkkoukRed leL;k,¡] fpark] ruko vkSj vU; fof{kIr leL;k,¡] Hk;kog] viekutud] fujk'kktud] èkedh nsus okyh] çfrLièkÊ] vçR;kf'kr vkSj Hkzfer djus okyh fLFkfr;k¡ iSnk gksaxhA vU; dh rqyuk esa dyst dk vkRegR;k çfr'kr Hkh vfèkd gSA flUgk ,V vy ¼2000½] ds vuqlkj dukMk ds Nk= Hkkjrh; Nk=ksa dh rqyuk esa vfèkd fpM+fpM+s gksrs gSaA vè;;u us fu"d"kZ fudkyk fd Hkkjrh; Nk= HkkoukRed dsafær eqdkcyk j.kuhfr;ksa dk mi;ksx dj jgs gSa vkSj dukMkbZ Nk= eqdkcyk djus dh j.kuhfr;ksa dk vfèkd çHkkoh >ax ls mi;ksx ugha dj jgs gSaA Hkkjrh; Nk=ksa esa dukMk ds Nk=ksa dh rqyuk esa de

85 vkRelEeku gSA ruko ls fuiVus ds fy, Hkkjrh; Nk= vfèkd leFkZu vkSj Vdjko ys jgs gSaA fyu f;ax feax] okax vkSj feax }kjk fo"ofo|ky;ksa vkSj çkS|ksfxdh ds dystksa esa Nk=ksa dh ruko ls fuiVus dh j.kuhfr;ksa ij ,d vkSj vè;;u fd;k x;kA fyu f;ax feax ¼2010½ us ik;k fd f'k{kk ds Lrj esa f'k{kd HkkoukRed {kerk dh mis{kk djrs gq, Kku vftZr djus ij cy nsrs gSaA vè;;u us fu"d"kZ fudkyk fd ;fn f'k{kd vfèkd ruko okys Nk=ksa dh vksj è;ku ugha nsrs gSa rks ;s Nk= dqN vlkekU; O;ogkj fn[kk ldrs gSaA ,d LoLFk 'kjhj vkSj fnekx dks cuk, j[kus ds fy, O;fä dks vius thou dh rukoiw.kZ ?kVukvksa dh ns[kHkky djus dh vko';drk gksrh gSA th] gksax ,aM <kax ¼2011½] }kjk fd, x, vè;;u us dyst ds Nk=ksa ds ekufld ruko vkSj ruko dks nwj djus ds rjhdksa dks le<us dh dksf'k'k dhA vè;;u us dyst ds Nk=ksa ds ekufld ruko vkSj jkstxkj dh fLFkfr;ksa vkSj vè;;u dh fLFkfr vkSj ekufld ruko ds chp ldkjkRed lacaèk fn[kk;kA ys[kdksa }kjk nh xbZ fofHkUu eqdkcyk j.kuhfr;k¡ dyst thou ds fy, tYn ls tYn vuqdwy gSa vkSj vè;;u ds çHkko esa lqèkkj djuk] dyst ds Nk=ksa dh dfj;j 'kq: djus dh {kerk esa lqèkkj djuk vkSj dfj;j dh lgh voèkkj.kk LFkkfir djuk] ikfjokfjd fLFkfr;ksa ds dkj.k ekufld ruko dks de djuk vkfn gSaA - oslsd] dks;y vkSj osjk ¼2010½ us udkjkRed çHkko ds fy, ik, x, fyax varj ds ckjs esa dgk] yM+fd;ksa esa yM+dksa dh rqyuk esa udkjkRed ruko ds mPp Lrj dk vuqHko gksrk gSA vè;;u esa ik;k x;k fd gks ldrk gS fd yM+ds Hkh udkjkRed ruko ds leku çHkko ls xqtj jgs gksa ysfdu yM+fd;k¡ vè;;u ds ekè;e ls bls çdV djus dks rS;kj gSaA vfu;af=r ruko dsoy udkjkRed çHkko ls lacafèkr ik;k x;k] u fd ldkjkRed çHkko ;k thou larqf"V lsA bldk mYys[k blfy, fd;k x;k gS D;ksafd udkjkRed çHkko vkSj eqdkcyk djus dh j.kuhfr;ksa ls lacafèkr csdkcw ruko lfØ; eqdkcyk gks ldrk gSA [kku vkSj dkSlj ¼2013½ us fu"d"kZ fudkyk fd ruko fuf'pr :i ls vdknfed çn'kZu dks udkjkRed rjhds ls çHkkfor djrk gS] gkyk¡fd fyax ds vuqlkj dksbZ egRoiw.kZ varj ugha ik;k x;kA twfu;j vkSj lhfu;j Nk=ksa ds chp varj Li"V FkkA ruko] fuf'pr :i ls] dq'kyrkiwoZd vè;;u djus vkSj le; ds çcaèku dh {kerk dks çHkkfor djrk gSA fu;fer :i ls vè;;u djuk egRoiw.kZ gS] ;g vdknfed ncko dks de djus esa enn djrk gS vkSj mUgsa vius y{;ksa dks iwjk djus esa enn djrk gSA
86 bl isij esa leh{kk fd, x, vè;;uksa dh ,d J`a[kyk ¼mnkgj.k ds fy,] iks;jkt+yh] dokuq?k] csdj] vkSj vfYVeh] 2004(;s vkSj buksl] 2003] 2010½ us lkaL"frd ruko dk vkdyu djus ds fy, ,d gh ç'ukoyh dk mi;ksx fd;kA varjkZ"Vªh; Nk=ksa ds fy, lap;h ruko Ldsy ¼ laèkw vkSj vljkcknh] 1991] 1994] 1998½A bl ç'ukoyh esa lkr mi&Jsf.k;ksa esa foHkkftr 36 vkbVe 'kkfey gSAdfFkr HksnHkko] gkseflduslj] dfFkr uQjr] Hk;] ifjorZu] vijkèk vkSj xSj&fof'k"VA pkot; vkSj Ldksjksusd ¼2008½ us bl ç'ukoyh dk ç;ksx pkj eqä ç'uksa ds lkFk fd;k(gkyk¡fd] iSekus ds fu"d"kZ vkSj pkj vksiu ,aMsM ç'u vlaxr Fks] ftlus varjjk"Vªh; Nk=ksa ds vuqHko dks le<us ds fy, ,d vyx i)fr dks ykxw djus dh vko';drk dks çnf'kZr fd;kA Mlsfy;j ,V vy ¼2008½ us 23 Nk=ksa ds ruko Lrj vkSj 'kS{kf.kd çn'kZu esa deh ds chp ,d etcwr lacaèk ik;k gSA dyst ds Nk= ds 'kS{kf.kd ruko vkSj mudh fpark] le; çcaèku vkSj vodk'k larqf"V ds lacaèk ij feJk vkSj jsathFkk ¼2000½ }kjk fd;k x;k ,d vè;;u A vè;;u mez vkSj fyax ds vkèkkj ij Lukrd Nk=ksa ds vdknfed ruko vkSj fpark] le; çcaèku vkSj vodk'k larqf"V tSls fofHkUu dkjdksa ls blds varlZacaèk ij vkèkkfjr FkkA vè;;u ds fy, fopkj fd, x, lHkh mik;ksa ij fyax varj dk egRoiw.kZ çHkko iM+rk gSA lkFk gh mez dk varj ;k dfu"B&ofj"B erHksn ruko ds Lrj ij çHkko Mkyrs gSaA cgqfHkUu:ih fo'ys"k.k esa fpark] le; çcaèku] vodk'k larqf"V lHkh 'kS{kf.kd ruko ds iwoZlwpd FksA Nk=ksa dks çHkkfor djus okys rukoksa dks 'kS{kf.kd] foÙkh;] le; vkfn esa oxÊ"r fd;k tk ldrk gSA Nk=ksa esa ruko dks de djus ds rjhdksa esa çHkkoh le; çcaèku] lkekftd leFkZu] ldkjkRed iqueZwY;kadu vkfn 'kkfey gSaA tc varjkZ"Vªh; Nk= vius x`g ns'kksa ls nwljs ns'k esa tkrs gSa] rks mUgsa dbZ rjg dh pqukSfr;ksa dk lkeuk djuk iM+rk gS] ftlesa ,d u, okrkoj.k ds lkFk rkyesy fcBkuk Hkh 'kkfey gSA bl çdkj] lkaL"frd ruko lkfgR; esa ppkZ dk lcls vke ruko gSA lkaL"frd ruko mu voèkkj.kkvksa esa ls ,d gS ftldk mi;ksx laoèkZu ds nkSjku eukslkekftd dfBukb;ksa dks le<us ds fy, fd;k tkrk gS(bls thou dh ?kVukvksa ds tokc esa ,d ruko çfrfØ;

100%	**MATCHING BLOCK 51/145**	SA	SARITA HINDI VERSION.docx (D143553953)

k ds :i esa ifjHkkf"kr fd;k x;k gS

tks
fd laL"fr ds vuqHko esa fufgr gSA ¼csjh] 2006] i`"B 294½A

87 fuYlu ,V vy ¼2008½ }kjk ,d vkSj vè;;u esas ik;k fd varjkZ"Vªh; Nk= Hkk"kk vkSj lapkj ckèkkvksa vkSj LFkkuh; jhfr&fjoktksa ds eqíksa lfgr estcku laL"fr ds lkFk lkaL"frd erHksnksa esa pqukSfr;ksa dh mEehn dj ldrs gSaA fQj Hkh] varjjk"Vªh; Nk=ksa ds iwokZxzg ;k uLyokn ds lkFk eqBHksM+ksa ds fy, de rS;kj gksus dh laHkkouk gS vkSj os ik ldrs gSa fd os eukslkekftd :i ls lqlfTtr ugha gSa ;k bl vuqHko dks çcafèkr djus ds fy, rS;kj ugha gSaA njvly] psu ¼1999½ us crk;k fd uLyh; iwokZxzg ls fuiVus ds rjhdksa dk çcaèku vkSj lh[kuk ,d estcku laL"fr ds fy, varjjk"Vªh; Nk=ksa ds lek;kstu ds fy, ,d egRoiw.kZ dkS'ky gks ldrk gSA jathrk ,e] vkSj fe'ksy ,e ¼2000½] dyst ds Nk=ksa ds vdknfed ruko vkSj mudh fpark] le; çcaèku vkSj vodk'k larqf"V ds lacaèk ij fd, x, ,d lg&lacaèk ij vè;;u] iq#"kksa dks vodk'k xfrfofèk;ksa ls efgykvksa dh rqyuk esa vfèkd ykHk gqvkA twfu;j vkSj lhfu;lZ dh rqyuk esa Ýs'kesu vkSj lksQksjksj Nk=ksa esa ruko ds çfr vfèkd çfrfØ;k FkhA fpark] le; çcaèku vkSj vodk'k dh larqf"V lHkh 'kS{kf.kd ruko ds iwoZlwpd FksA pku lhds] ,V vy ¼2009½] uflZax Nk= ds ruko vkSj uSnkfud vH;kl esa mudh eqdkcyk djus dh j.kuhfr;ksa ij vk;ksftr ,d Øl&vuqHkkxh; o.kZukRed vè;;u lcls vke ruko is'ksoj Kku vkSj dkS'ky dh deh FkhA eqdkcyk djus dh j.kuhfr;ksa vkSj LFkkukarj.k ds pkj çdkjksa esa ls lcls vfèkd ckj bLrseky fd;k x;k FkkA vy&nqcbZ ,l,] ,V vy ¼2011½] esfMdy Nk=ksa vkSj mudh eqdkcyk djus dh j.kuhfr;ksa ds chp ruko dh èkkj.kk ij vk;ksftr ,d Øl&lsD'kuy o.kZukRed vè;;u lcls vke ruko Hkfo"; dh fpark Fkh ftlds ckn foÙkh; dfBukb;k¡ Fkha ruko ds egRoiw.kZ Hkfo";oäk èkweziku dj jgs Fks Nk=ksa us lfØ; eqdkcyk] èkkfeZd eqdkcyk jhÝSfeax dk bLrseky fd;k] ;kstuk] vkSj ruko ls fuiVus ds fy, Loh"fr A Nk=ksa }kjk crk, x, ruko eq[; :i ls foÙkh; vkSj 'kS{kf.kd eqís FksA Nk=ksa us cpus ds ctk; lfØ; eqdkcyk j.kuhfr;ksa dks viuk;kA ,y valkjh MCY;w] vkSj vksLØksph vkj ¼2014½] y{k.kksa vkSj LokLF; f'kdk;rksa vkSj fo"ofo|ky; esa dfFkr ruko ds lkFk muds lacaèk ij fd, x, ,d vè;;u % felz esa X;kjg ladk;ksa esa Nk=ksa dk loZs{k.k fo'ks"k :i ls euksoSKkfud vkSj nnZ dh LokLF; f'kdk;rksa ds mPp çlkj esa laiUu gqvkA nnZ ds çdkj ds y{k.k fpark iSnk djrs gSa vkSj fo"ofo|ky;ksa esa

88 fuokjd dkjZokb;ksa dk vkºoku djrs gSaA O;kid dk;ZØeksa dh flQkfj'k dh tk,xh tks dfFkr ruko vkSj LokLF; f'kdk;rksa dh lg&?kVuk dks è;ku esa j[krs gSaA dqjZr my ,su egQwt ,V vy ¼2017½] us tk¡p dh fd ruko foÙkh; eqíksa] LokLF; leL;kvksa] lkekftd eqíksa vkSj 'kS{kf.kd dfBukb;ksa lfgr eqíksa ls lacafèkr gSA ruko ;k rks udkjkRed ;k ldkjkRed :i ls vdknfed miyfCèk dks çHkkfor dj ldrk gS] muds vè;;u dk mís'; esfMdy Nk=ksa ds ruko vkSj vdknfed çn'kZu ds chp lacaèkksa dk irk yxkuk vkSj vdknfed çn'kZu dks çHkkfor djus okys ruko ds lzksrksa dh igpku djuk gSA ,e,l,lD;w ds lHkh Mksesu fo"oluh; gSa tks ØksucSd ds vYQk dks 0-7 ls vfèkd fn[kk jgs gSaA ijh{kk ls igys vkSj ckn esa iq#"kksa dh rqyuk esa efgyk Nk=ksa esa ruko dk Lrj vfèkd ik;k x;kA mUgksaus lq<ko fn;k fd ;g egRoiw.kZ gS fd ruko dks çHkkoh >ax ls çcafèkr djus ds fy, Nk=ksa dks ijke'kZ vkSj çf'kf{kr fd;k tkuk pkfg, vU;Fkk ;g muds LokLF; vkSj 'kS{kf.kd çn'kZu ij çfrdwy çHkko Mky ldrk gSA nsc ,V vy ¼2014½] dksydkrk ds ik¡p futh ekè;fed fo|ky;ksa ds 400 iq#"k Nk=ksa ij vè;;u fd;k] tks d{kk 10 vkSj 12 esa i>+ jgs FksA 35 çfr'kr Nk=ksa esa mPp 'kS{kf.kd ruko ik;k x;k vkSj 37 çfr'kr esa mPp fpark dk Lrj ik;k x;kA dgk tkrk gS fd lhekar xzsM okys Nk=ksa esa csgrj xzsM okys Nk=ksa dh rqyuk esa ruko dk Lrj vfèkd gksrk gSA lkFk gh] ikBîsrj xfrfofèk;ksa esa 'kkfey Nk=ksa dks mu Nk=ksa ls lacafèkr gksus ds dkj.k vfèkd rukoxzLr ik;k x;k tks blesa 'kkfey ugha FksA 'ks[k ch-Vh- vkSj vU; ¼2004½] ruko vkSj eqdkcyk djus dh j.kuhfr;ksa ij fd;k x;k ,d vè;;u ikfdLrkuh esfMdy Ldwy dk ,d ekeyk vdknfed vkSj ijh{kk lcls 'kfä'kkyh ruko gSaA [ksy] laxhr] nksLrksa ds lkFk ?kweuk] lksuk ;k vyxko esa tkuk fofHkUu eqdkcyk ra= gSaA ruko vdknfed çn'kZu dks çHkkfor dj ldrk gSA ;fn vko';d gks] rks Nk= fdlh lgdeÊ ls ckr djuk ilan djrs gSaA tkslsQ bZ- vxksyk vkSj gsujh vksaxksjh ¼2009½] Lukrd Nk=ksa ds chp vdknfed ruko ds vkdyu ij vk;ksftr ,d o.kZukRed vè;;u vfèkdka'k Nk= viuh nSfud 'kS{kf.kd xfrfofèk;ksa esa ruko dk vuqHko dj jgs gSaA ;g bafxr djrk gS fd Nk=ksa dks ?kj ;k ifjlj ls cgqr vfèkd ncko dk vuqHko gksrk gS] tks muds nSfud thou ij udkjkRed ;k ldkjkRed çHkko Mkyrk gSA

89 fons'kksa esa vè;;u djus okys varjkZ"Vªh; Nk= vkerkSj ij vius ns'k esa mPp thih, j[krs gSaA urhtru] mUgsa fo"okl gks ldrk gS fd os estcku ns'k esa vdknfed mR""Vrk ds leku Lrj dks çkIr dj ldrs gSa(;s csesy mEehnsa ruko vkSj volkn dk dkj.k cu ldrh gSa ¼jkslsUFky] jlsy] vkSj Fkelu] 2008½A fQj Hkh] varjjk"Vªh; Nk= tks mPp 'kS{kf.kd ;ksX;rk vkSj vkRe&çHkkodkfjrk dh fjiksVZ djrs gSa] os de 'kS{kf.kd ruko dk vuqHko djrs gSa ¼fuYlu] 2007½A lqczef.k vkSj dkèkhjou ¼2017½ us Nk=ksa ds chp 'kS{kf.kd ruko vkSj ekufld LokLF; ds chp lacaèk dk [kqyklk fd;kA mUgksaus bl ckr dk leFkZu fd;k fd 'kS{kf.kd ruko vkSj ekufld LokLF; lg&laca/k gSa vkSj Nk= 'kS{kf.kd lajpuk ls rax gSaA ekrk&firk vkSj Ldwy mPp xzsM ds fy, Nk=ksa ij cgqr vfèkd ncko Mkyrs gSa tks Nk=ksa dks fujk'k djrs gSa] vkxs ;g tksM+us ds fy, fd ekxZn'kZu ds ekeys esa ekrk&firk vkSj Ldwy ls i;kZIr leFkZu ugha feyrk gSA vdknfed eapksa ij jpukRed çn'kZu djus ij Nk= ekufld :i ls LoLFk gksrs gSaA mUgksaus ;g Hkh çfrikfnr fd;k fd

78%	**MATCHING BLOCK 52/145**	**SA**	PhD thesis monoj das.docx (D144733372)

futh Ldwyksa ds Nk=ksa ij ljdkjh Ldwyksa ds Nk=ksa dh rqyuk esa

vfèkd gkseodZ vkSj vU; 'kS{kf.kd lacafèkr vlkbuesaV ds dkj.k vfèkd ncko Mkyk tkrk gSA futh vkSj ljdkjh Ldwyksa ds Nk=ksa ds ekufld LokLF; esa egRoiw.kZ varj ik;k x;kA mUgksaus tksj nsdj dgk fd xjhc lkekftd vkfFkZd i`"BHkwfe vkSj tksf[ke dh deh okys ljdkjh Ldwy ds Nk=ksa dh rqyuk esa futh Ldwyksa ds Nk=ksa dk vyx iks"k.k vkSj O;kid vuqHko gksrk gSA ;g ruko c>+us dk ,d dkj.k gSA vdknfed ruko vkerkSj ij nqfu;k Hkj ds Nk=ksa }kjk eglwl fd;k tkrk gS] pkgs os vius ns'k esa i>+ jgs gksa ;k fons'k esaA gkyk¡fd] ,slk yxrk gS fd varjjk"Vªh; Nk=ksa dks vius ?kjsyw Nk= lkfFk;ksa dh rqyuk esa vfèkd 'kS{kf.kd pqukSfr;ksa dk lkeuk djuk iM+rk gS] D;ksafd muds ns'k vkSj estcku ns'k esa lh[kus dh 'kSyh ;k f'k{k.k i)fr;ksa ds chp varj gksrk gS ¼ pkot; vkSj Ldksjksusd] 2008(bfjt+kjh] vkSj ekykZs] 2010(lSaMlZ vkSj yqf'kaxVu] 1999½A mnkgj.k ds fy,] ,f'k;kbZ Nk= vius egRoiw.kZ dkS'ky dks ykxw djus esa leL;k dh fjiksVZ djrs gSa vkSj ftl rjg ls os LVkQ ;k QSdYVh ds lkFk O;ogkj djrs gSa ¼eSfyuØksM~V ,aM ysvksax] 1992½A vdknfed ruko dh çfrfØ;k esa] feJk vkSj dSfLVyks ¼41995½ us ik;k fd varjkZ"Vªh; Nk=ksa us vfèkd laKkukRed çfrfØ;kvksa ¼tSls ruko dks de djus ds fy, dqN çHkkoh j.kuhfr;ksa dk
90 mi;ksx½ dh lwpuk nh] tcfd vesfjdh Nk=ksa us O;ogkfjd çfrfØ;kvksa ¼tSls èkweziku½ dh lwpuk nhA blds vykok] feJk ,V vy ¼42003½ us ik;k fd varjjk"Vªh; efgyk Nk=ksa esa muds iq#"k dh rqyuk esa vfèkd HkkoukRed çfrfØ;k,¡ ¼;kuh Mj vkSj'kkjhfjd y{k.k] tSls ilhuk] dk¡iuk] gdykuk] 'kjhj ;k fljnnZ vkSj otu de gksuk ;k c>+uk½ vkSj O;ogkfjd çfrfØ;k,¡ ¼jksuk] vkRe&nqO;Zogkj½ FkhaA iq#"k Nk=ksa esa ruko ds çfr lcls vfèkd çfrfØ;k laKkukRed Fkh(bl çdkj] muds ruko dk ewY;kadu HkkoukRed ds ctk; ckSf)d Fkk ¼ feJk ,V vy] 2003½A [oktk vkSj MsEilh ¼42008½ us ;g Hkh tkapk fd dSls varjjk"Vªh; Nk= vkSj vLVªsfy;kbZ Nk= 'kS{kf.kd ruko lfgr fo"ofo|ky; thou dh pqukSfr;ksa dk lkeuk djrs gSaA fu"d"kksZa us ladsr fn;k fd varjjk"Vªh; Nk=ksa us cpko] neu vkSj vU; fuf"Ø; eqdkcyk j.kuhfr;ksa dk bLrseky fd;k(gkyk¡fd] ,slk blfy, gks ldrk gS D;ksafd uewus us mPp Lrj dh csesy vis{kkvksa dh lwpuk nh FkhA eqdkcyk djus dh j.kuhfr;k¡ os rjhds gSa ftuls yksx rukoiw.kZ fLFkfr;ksa ij çfrfØ;k djrs gSaA yktj ¼41993½ us eqdkcyk dks fof'k"V ckgjh vkSj@;k vkarfjd ek¡xksa dk çcaèku djus ds fy, py jgs laKkukRed vkSj O;ogkfjd ç;klksa ds :i esa ifjHkkf"kr fd;k gS] ftudk ewY;kadu O;fä ds lalkèkuksa ij dj yxkus ;k mlls vfèkd ds :i esa fd;k tkrk gS ¼4i`"B 237½A dbZ vyx&vyx çdkj dh eqdkcyk j.kuhfr;k¡ gSa] vkSj mudh çHkko'khyrk ruko ds çdkj vkSj O;fäxr eqBHksM+ksa ij fuHkZj djrh gSA varjkZ"Vªh; Nk=ksa ij lkfgR; us buesa ls dqN fofHkUu rukoksa vkSj fofHkUu j.kuhfr;ksa dh Hkwfedk vkSj çHkko'khyrk ij ppkZ dhA mnkgj.k ds fy, vÝhdh vkSj ,f'k;kbZ varjkZ"Vªh; Nk=ksa dk lk{kkRdkj fy;k vkSj crk;k fd mUgksaus vius u, okrkoj.k esa HkykbZ vkSj lek;kstu ds fy, vkB j.kuhfr;ksa dk mi;ksx fd;k Lo;a dks vkSj nwljksa dks tkuuk vkSj le<uk] lkfFk;ksa ds lkFk fe=rk cukuk vkSj lykgdkjksa ds lkFk lacaèk cukuk] O;fäxr foLrkj djuk fo"o„f"V] t:jr iM+us ij enn ek¡xuk] vaxzsth n{krk vkSj leL;kvksa dks nwj djukA blds vykok] Lt+kcks ¼42015½ us vè;;u fd;k fd dSls varjkZ"Vªh; Nk= ruko dks nwj djus dk lkeuk djrs gSa vkSj ik;k fd çkFkfed eqdkcyk fpark ds vfèkd y{k.kksa dh Hkfo";ok.kh
91 djrk gS tcfd ekè;fed eqdkcyk le; ds lkFk vuqHko fd, x, y{k.kksa dh la[;k dks de djrk gS vkSj ruko ds udkjkRed çHkko dks de djrk gSA varjkZ"Vªh; Nk= Hkh nsjh] lalkèkuksa dh deh] y{;ksa dks çkIr djus esa foQyrk vkSj lkekftd cfg"dkj dh rjg eglwl djus] ;k çfrLièkkZ] le; lhek] dke] ftEesnkfj;ksa vkSj vfèkHkkj ds ncko ds dkj.k fujk'kk ls vfèkd vdknfed ruko dk vuqHko djrs gSaA ruko rc Hkh gksrk gS tc cgqr vfèkd ifjorZu] rhoz ifjorZu lfgr] ,d Nk= ds thou vkSj y{;ksa dks ckfèkr djrs gSa ¼ feJk] fØLV] vkSj cqjsaV] 2003½A gkyk¡fd] [oktk vkSj MsEilh ¼42008½ vkSj jkbl] lqg] ;kax] pks vkSj Msfol ¼42016½ us vesfjdk vkSj vLVªsfy;k esa varjjk"Vªh; Nk=ksa vkSj ?kjsyw

70%	MATCHING BLOCK 53/145	SA	SANDEEP SIR HINDI VERSION.pdf (D143525322)

Nk=ksa ds chp dfFkr 'kS{kf.kd ruko esa dksbZ egRoiw.kZ varj ugha

ik;kA fnypLi ckr ;g gS fd feJk vkSj dSfLVyks ¼41995½ us ik;k fd vesfjdh Nk=ksa us varjjk"Vªh; Nk=ksa dh rqyuk esa mPp Lrj ds 'kS{kf.kd ruko dh lwpuk nhA mUgksaus ik;k fd ,f'k;kbZ varjjk"Vªh; Nk=ksa dh rqyuk esa vesfjdh Nk=ksa ds chp bl çdkj dk ruko vfèkd ckj vkRe&yxk;k tkrk gSA gkyk¡fd] varjjk"Vªh; Nk=ksa us O;fäxr dfe;ksa dks Lohdkj djus ls tqM+s dyad ls cpus ds fy, lkekftd :i ls okaNuh; rjhds ls lokyksa ds tokc fn, gksaxsA eatw feJk ¼42017½ us dyst ds Nk=ksa dh miyfCèk ij vdknfed ruko ds çHkko vkSj

35%	MATCHING BLOCK 55/145	SA	PhD thesis monoj das.docx (D144733372)

iq#"k vkSj efgyk Nk=ksa ds ruko Lrj esa varj dh tk¡p dhA ruko ds Lrj dks ekius ds fy, vdknfed ruko iSekus dk mi;ksx fd;k x;k

Fkk vkSj fiNyh ijh{kkvksa esa Nk=ksa ds vadksa dks vdknfed miyfCèk ds eki ds :i esa fy;k x;k FkkA 55% ls vfèkd vad çkIr djus okys Nk=ksa dks mPp miyfCèk lewg esa fy;k x;k vkSj 55% ls de vad çkIr djus okys Nk=ksa dks fuEu miyfCèk lewg esa fy;k x;kA çkIr vka¡dM+
ksa