

PRE-PH.D. COURSE (ONE SEMESTER COURSE)

Archaeology					
Code	Title of the Paper	Credits (Marks)			
		Theory (External+ Sessional)	Term Paper	Practical	Total
CORE COURSES					
SOHSS/ARCH/CC-1	Research methodology	4(60+20+20)	-	-	4 Credit (100)
SOHSS/ARCH/CC-2 (a)	Research and Publication Ethics (RPE)	1 (60+20)	-	1 (20)	2 Credit (100)
SOHSS/ARCH/CC-2 (b)	Principles of Archaeology	1(60+20+20)			1 Credit (100)
ELECTIVE COURSES					
(Choose any One Group of Courses From the Following Two Groups)					
Group-A					
SOHSS/ARCH/EC-1	Ancient Indian History and Culture	(60+20+20)	-	-	4 Credit (100)
SOHSS/ARCH/EC-2	Palaeography, Epigraphy, Numismatic, Art History and Architecture	(60+20+20)	-	-	4 Credit (100)
OR					
Group-B					
SOHSS/ARCH/EC-1	Analytical and Scientific Archaeology	(60+20+20)	-	-	4 Credit (100)
SOHSS/ARCH/EC-2	Prehistoric and Protohistoric Archaeology	(60+20+20)	-	-	4 Credit (100)

PRE-PH.D. PROGRAMME (ONE SEMESTER COURSE)

CORE COURSES

There shall be to Core Courses which shall carry 3 and 4 credits/100 marks each and two Elective courses which shall carry 4 credit each. The Theory Paper will be of 60 marks and the Sessional tests will be 40 marks (60+40=100). For Elective courses the Students shall have to opt one group of courses consisting to courses each (A and B).

CORE COURSES-I

Course-I Research Methodology (4 Credits)

Unit-I Meaning of research; Objectives of research; Types of research; significance of research, New trends in archaeological Research, Research Process, Criteria of good research, Problems encountered by Researchers in India.

- Unit-II** What is a research Problem? Selecting the Problem, Necessity and defining the Problem, Techniques involved in archaeological scientific archaeology.
- Unit-III** Hypothesis: meaning, Characteristics and importance of Hypothesis in Research, Types of testing of Hypothesis, Problem in Formulating Hypothesis.
- Unit-IV** Research Design: Meaning of Research Design; Need for Research Design; Features of a good Research Design; Types of Research Design: Exploratory, Descriptive, Diagnostic and Experimental.
- Unit-V** Thesis writing, Book Review and writing a book review, references and preparation of bibliography.

References

- Ahuja, Ram (2001), Research Methods, Delhi, Rawat Publications.
- Bailey, Kenneth D. (1982). Methods of Social Research, New York, The Free Press, Second Edition.
- Blalock, Hubert M. (1970), Social Statistics, New York: Tata McGraw-Hill.
- Champion, Nean, J. (1981), Basic Statistics for Social Research, New Delhi: Macmillan Publishing, New York.
- Dooley, David (1998), Social Research Methods, Prentice Hall of India, New Delhi.
- Kothari, C. R. (1988), Research Methodology, illey Publishers, New Delhi.
- Moser, S. C. And Kalto, G. (1971), Survey Methods in Social Investigation, London: Heinemann.
- Thakur, Devender (2003), Research Methodology in Social science, New Delhi: Deep and Deep Publications Pvt. Ltd.
- Wilkinson, T. S. and Bhandarkar, P. L. (1984), Methodology and Techniques of Social Research, Bombay: Himalaya Publishing House.

Course-II (a) Research and Publication Ethics ((As per UGC Guideline) (2 Credit)

Theory

RPE01: PHILOSOPHY AND ETHICS (3hrs)

- 1- Introduction to philosophy: definition, nature and scope, concept, branches
2. Ethics: definition, moral philosophy, nature of moral judgments and reactions.

RPE 02: SCIENTIFIC CONDUCT (5 hrs)

1. Ethics with respect to science and research.
2. Intellectual honesty and research integrity.
3. Scientific misconducts: falsification, fabrication and plagiarism(FFP)
- 4.Redundent publications: duplicate and overlapping publications, salami slicing
5. Selective reporting and misrepresentation of data.

RPE03: PUBLICATION ETHICS(7 HRS)

1. Publication Ethics: definition, introduction and importance
2. Best practises/standards setting initiatives and guidelines: COPE, WAME,etc
3. Conflicts of interest.
4. Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types
5. Violation of publication, ethics, authorship and contributorship.
6. Identification of application misconduct, complaints and appeals.
7. Predatory publishers and journals.

Practice

REP 04: OPEN ACCESS PUBLISHING (4 Hrs)

1. Open access publications and initiatives
2. SHERPA/ RoMEO online resource to check publisher copyright & self- archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal Finder/ Journal suggestion stools viz. JANE, Elsevier Journal finder, Springer Journal suggester, etc.

5. PUBLICATION MISCONDUCT (4 Hrs.)

A. Group Discussions (2 hrs)

1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: examples and fraud from India and abroad

B. Software tools (2hrs)

Use of plagiarism software like Turn tin, urkund and other open source software tools

REP 06: DATABASES AND RESEARCH METRICS (7 Hrs)

A. Databases (4 hrs)

1. Indexing databases
2. Citation database: Web of science, Scopus, etc.

B. Research Metrics (3 hrs)

1. Impacts factor of journal as per Journal Citation reports, SNIP, SJP,IPP, Cite Score
2. Metrics: h- index, g index, i10 index, altmetrics

Course-II (b) Principles of Archaeology

1 Credit

Unit –I What is an archaeological site? Excavation; Planning the excavation, (Permission, funding, safety, Staff, Equipment, logistics); Techniques of recording (writing record, drawing records, photographic records, finds record).

Unit-II Post field work planning, processing and finds analysis (pottery, metals, stone, organic artefacts and eco-facts (Bones, shells, seed & other plant remains) and environmental Samples, Pollen analysis, land snails, soils and sediments. Interpreting the evidences:

References

1. Wheeler, Mortimer - Archaeology from the Earth, Oxford University press, London, 1955.
2. Wheeler, Mortimer - Prithvi Se Puratattva (Hindi Translation).
3. Atkinson, R.J.C. - Field Archaeology, II edition, 1958.
4. Kenyon, K.N. - Beginning in Archaeology, 1961.
5. Delaet, S.J. - Archaeology and its problems, London, 1957.
6. Crowford, O.G.S. - Archaeology in the Field, III impression, London, 1954.
7. Webester, Graham - Practical Archaeology.
8. Ojha, R.P. - Kshetriya Prutattva (Hindi)
9. Mohammad Sanullah - "Notes on the Preservation of Antiquities in the field", Ancient India, No. 1 pp. 82.
10. Piggot, S. - Approach to Archaeology.

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| 11. Hemond, P.C. | - Archaeological Techniques for Amateurs. |
| 12. Hester, J.J. | - Introduction to Archaeology. |
| 13. Shurma, Y.D. | - Remains of Early Historical Cities (Archaeological Remains Monuments and Museums : Part, I-1964) |
| 14. Sharma. Y.D. | - "Exploration of Historical Sites" Ancient India, No. 9, pp. 166-169. |
| 15. Lal, B.B. | - "Excavation at Hastinapur and other Exploration, 1950-52 Ancient India, No.-10-11 : pp. 4-151. |
| 16. Sharma, G.R. | - Excavations at Kausambhi, 1957-59. |
| 17. Wheeler, M., Gosh, A and Deva, Krishana | - "Arikamedu-An Indo Roman Trading station on the East coast of India, Ancient India, No. 2, pp. 17- 124. |
| 18. Wheeler, R.E.M. | - "Brahmagiri and Chandravali, Megalith and other cultures in Mysore State". Ancient India No. 4, 1948, p. 180-310. |
| 19. Lal. B.B. | - "Sisupalgarh 1948 and Early Historical fort in Eastn India. Ancient India No. 5, 1949, pp. 62-105. |
| 20. Plender lieth, H.J. | - The conservation of Antiquities and works of art |
| 21. Agrawal, D. P. | - An Introduction to the Preservation of Paintings. |

CORE COURSE-II

ELECTIVE COURSES

The candidates are required to opt any one Group of courses consisting of two papers from the following groups of courses:

ELECTIVE COURSE-IIIA (Optional)

Elective Course-IIIA: Ancient Indian History and Culture

Unit-I Nature of Source of Ancient Indian History: Nature, history and value of Vedic and Dharmshastra Literature

Unit-II Other Ancient Indian Literature: Historical value of the Buddhist, jain, Tmil literature; Literature of Itihas-Purana tradition: Ramayana, Mahabharata; Puranas; Historical drama and Biographical literature; Accounts of foreign travelers.

Unit III: Post Vedic Society up to pre Gupta times- caste system, condition of women; Gupa society (Till 650 CE).

Unit IV: Post Gupta (from 650- 1200A.D.Society: Social stratification, proliferation of castes, inheritance, everyday life, migration and settlement of Aryan groups in different regions of India.

References

1. Jha, D.N. and Shrimali K.M., Prachin Bharat Ka Ithihas, Delhi, Hindi Directorate, 1990).
2. Majumdar, R.C. et al., History and Culture of the Indian People, Vols 4. III, IV and V (Mumbai, Bhartiya Vidya Bhavan Series, 1970, 1979, 1980).
3. Munshi, V.K.M. and R.R. Diwakar, Bharatiya Vidya Bhavan Series -Indian Inheritance, 3 vols (Bombay, Bhartiya Vidya Bhavan, 1965, 1970).
4. Nilkanta Sastri, K.A., A History of South India from pre-historic times to the fall of Vijaynagar (Chennai, OUP, 1983).

5. Stein, Burton, Peasant State and Society in Medieval South India.(Delhi, OUP, 1980).
6. Thapar, Romila, A History of India, Vol. 1 (Pelican, 1966, Penguin, Harmondsworth).
7. Thapar, Romila, Ancient Indian Social History.
8. Jain, K.C., Prachin Bharat ki samajik evam arthik sansthain.Om Prakash, Prachin Bharat ka samajik evam arthik itihās.
9. Achche, Lal Prachin Bharat Mein Kriśi, (Hindi), 1980.
10. Adhya, G. L. Early Indian Economics, Bombay. 1966.
11. Aiyanger, C. V. R. Ancient Indian Economic Thought, Varanasi. 1965.
12. Bajpeyi, K. D. Bharatiya Vyapar Ka Itihās. (Hindi). Mathura. 1951.
13. Bandopadhyaya, N. C. Economic Life and Progress in Ancient India, Calcutta.
14. Bandopadhyaya, N. C. Kautilya or An Exposition of his social Ideas and Political Theory Vol. I, Calcutta. 1972.
15. Bose, A. N. Social & Rural Economics of Northern India. Vol. I, Calcutta, 1966.
16. Das, Dipakranjan. Economic History of Deccan from 1st Cen. A.D. to 6th cen. A.D., Delhi. 1971.
17. Ghoshal, U. N. Contribution to the History of Hindu Revenue System, Calcutta, 1929.
18. Gopal, L. Aspects of History of Agriculture in Ancient India, Varanasi, 1980.
19. Gopal, L. Economic Life of Northern India (700-1200 A. D.). Delhi. 1965.
20. Jain, Beena. Guilds in Ancient India. Delhi. 1990.
21. Maity, S. K. Economic Life in Northern India in the Gupta Period. Varanasi, 1970.
22. Motichand Trade and trade Route in Ancient India. New Delhi. 1977.
23. Om Prakash. Early Land Grants and State Economy. Allahabad, 1988.
24. Pandey, B. K. Temple Economy Under the Cholas, New Delhi, 1984.
25. Rai, J. The Rural-Urban Economy and Social Change in Ancient India (300 B. C.-600 A.D.), Varanasi, 1974.
26. Singh, A. K. Indo-Roman Trade. Patna. 1988.
27. Srivastava, Balram. Trade & Commerce in Ancient India. Varanasi. 1968.
28. Bose, N.S., History of Chandelas
29. Gangully, D.C., History of Parmar Dynasty
30. Niyogi, Roma, History of Gahadwal Dynasty 1959
31. Pathak, Vishudhanand, Uttar Bharat Ka Rajnitik Itihās, (Hindi) 2006 (Ed)Luknow
32. Puri, B.N., Gurjar – Pratihār
33. Raichaudhury, H.C. Dynastic History of Northern India Vol. I & II
34. Tripathi, R.S., History of Kannauj
35. Vaidya, C.V., History of Medieval Hindu India 3 Vol. 1921-26- Pune
36. Winternitz, M, History of Indian Literature, Vol. I & II 1933, Culcatta

ELECTIVE COURSE-IVA (Optional)

Elective Course-IVA: Palaeography, Epigraphy, Numismatic, Art History and Architecture

- Unit-I** Beginning of writing in India with especial reference to the Harappan, Brahmi and Kharoshti script.
- Unit-II** Antiquity of coinage in India; Techniques of their Manufacturing.
- Unit-III** Symbols in Early Indian Coins.

Unit-IV Mauryan Art: Socio-Political background, development of indigenous school of art and their socio-religious background. Origin of Buddha's images, Iconographic development of art during Gupta age. Shunga (Satvahanas).

Unit-V Temples of Uttarakhand.

References

1. Agarwal, V. S. - Indian Art
2. --do-- - Studies in Indian Art
3. --do-- - Bhartiya, Kala (Hindi)
4. Bhattacharya, B. C. - Indian Images (Part 1)
5. Bachhofer, L. - Early Indian Sculpture
6. Ray, Niharranjan - Maurya and Post Mauryan Art
7. Coomaraswamy A. K. - Introduction to Indian Art
8. Coomaraswamy, A. K. - History of Indian and Indonesian Art
9. --do-- - Yakshas
10. Rowson, P. - Indian Art
11. Havell, E. B. - Hand book of Indian Art.
12. Saraswati, S. K. - A Survey of Indian Sculpture
13. Kramrisch, Stella - Indian Sculpture
14. Harle, J. C. - Gupta Sculpture
15. Swarup, S. - 5000 years of Art and Crafts in India and Pakistan
18. Chandra, Moti - Studies in Early Indian Paintings
19. Khandelvala, K. J. - The Development of Style in Indian Paintings.
20. Khandelvala, K. J. - Indian Sculptures and Paintings
21. Gairola, V. - Bhartiya Chitrakala
22. Sivaramamurti, C. - South Indian Paintings.
28. Sivaramamurti, C. - Art of India.
32. Agarwal, V. S. - Gupta Art
33. Harle, J. C. - Art and Architecture of Indian Subcontinent
34. Mishra, R. N. - Bhartiya Murtikala
36. Yajdani, G. - Ajanta
37. Marshall, J. - The Buddhist Art of Gandhar.

ELECTIVE COURSE-IIIB (Optional)

Elective Course -IIIB: Analytical and Scientific Archaeology

Unit-I History of Science and its application in archaeology: History, Development and application of Scientific and analytical Techniques in Archaeology.

Unit-II Different types of techniques and instruments used in archaeological study:

Dendrochronology; X-ray diffraction (XRD); Scanning electron microscopy; Radiocarbon dating; Thermo luminescence dating; Atomic absorption spectroscopy (AAS);

UNIT-III Analytical techniques: Application of Phosphate, elemental and trace element analysis in archaeological soils and bones; Estimation of isotopic ratios of carbon, nitrogen, oxygen and strontium in archaeological faunal remains to infer the palaeodiet, palaeoenvironment and residential mobility of ancient settlement.

References

1. Ingersoll, D., Yellen, J.E. and MacDonald, W.: Experimental archaeology, New York, 1977.
2. Atkinson, R.J.C. Field Archaeology. London. 1952.
3. Brill, Robert H. (ed.) : Science and Archaeology. Cambridge, 1971.
4. Brothwell, D. R. & S. E. Higgs (eds.): Science in Archaeology, London, 1969.
5. Clark, D. L.: Models in Archaeology, London, 1972.
6. Clark, David : Analytical Archaeology, London, 1968.
7. Daniel, G.: The Origin and Growth of Archaeology, London 1967.
8. Sankalia, H. D. : New Archaeology Its Scope and application in India, Lucknow. 1977.
9. Whitehead, A. N.: Science and the Modern world, New York, 1957.
10. Limbrey, Susa: Soil science and Archaeology, Academic Press, New York, 1975.
11. Smith, Keith A.: Soil Analysis Modern Instrumental techniques), new York, 1990.
12. Council on Soil Testing and Plant analysis, Georgia University, Athens, USA: Hand Book of Reference Methods for soil Analysis, 1992.
13. Bag, A.K. (ed.) History of Technology in India, Vol. I. New Delhi. 1997.
14. Bose, D.M. et. al. Concise History of Science in India . INSA. New Delhi. 1971.
15. Forbes, R. J. Studies in Ancient Technology, Vol. I to IX. Leiden. 1976.
16. Hodges, H. Technology in the Ancient World . London. Pelican. 1970.
17. Jaggi, O. P. Dawn of Indian Technology. Delhi. 1969.
18. Sankalia, H. D. Some aspects of Prehistoric Technology in India. New Delhi. 1970.
19. Singer, C. et. al. A History of technology .Vol. I & II. (relevant chapters).
20. Singh, R.N. : Ancient Indian Glass. Delhi. 1989.
21. Sinha, B.P. Sinha, Potteries in Ancient India.

ELECTIVE COURSE-IVB (Optional)

Elective Course-IVB: Prehistoric and Protohistoric Archaeology

Unit-I Prehistoric Archaeology and scope of prehistory: General Introduction, features and scope of Prehistory; Origin of man and tool technology, Prehistoric Tool Technologies, Typologies.

Unit-II Palaeolithic Culture: General Introduction to stone age in India and Geo-archaeological significance of prehistory; Stratigraphy and Cultural evidence; The Himalayan Context, Peninsular Context and Nepal and other regions.

Unit-III Development of urbanisation: New development in Indus Valley Civilization.

References

1. Pant, P.C. Prehistoric Uttar Pradesh. Delhi. Ghosh, A. (Ed.): An Encyclopedia of Indian Archaeology, Vols. I & II. (Relevant Portions). New Delhi, 1989.
2. Allchin B. & Allchin F.R.: The Rise of Civilization in India & Pakistan, New Delhi, 1983.
3. Zeumer, F.E. Pleistocene Period.
4. Rendell D., & Hobin, Pleistocene and Palaeolithic Investigations in Sohan Valley, N. Pakistan.
5. Jarrige, Catherine et.al [Ed.]: Mehargarh, Field Reports 1974-1985 from Neolithic Times to the Indus civilization. Karachi, Pakistan. 1995.
6. Jayaswal, V.: "Stone Age Technologies in India": History of Technology in India, Vol. I, New Delhi, 1997.
7. Leakey, L.S.B.: Olduvia Gorge 1959-1961, Volumes I, Cambridge, 1965.

8. Leakey, M.D.: Olduvia Gorge: Excavations in Beds I & II. 1960–1963, Cambridge, 1971.
9. Paddaya, K.: The Acheulian Culture of The Hunsgi Valley (Peninsular India) – A Settlement System Perspective, Poona, 1982.
10. Pant, P.C. & Vidula Jayaswal. Paisra: A Stone Age Settlement in Bihar, New Delhi, 1999.
11. Rendell, Dennell & Halim: Pleistocene & Palaeolithic Investigations in the san valley, North Pakistan.
12. H.D. Sankali: Stone Age Tools: Their Techniques, Names and Probable Functions, Deccan College, Pune, 1982.
13. H.D. Sankalia- Prehistory and Protohistory of India and Pakistan, Deccan college, Pune, 1974
14. Poona, 1982.
15. Sharma, G.R. & J.D. Clark (ed.): Palaeo environments and Prehistory in the Middle Son Valley, Allahabad, 1983.
16. Sharma, G.R. et.al: From Hunting and Food Gathering to Domestication of Plants and Animals, Beginnings of Agriculture, Allahabad, 1980.
17. Singh., Birendra Pratap: Early Farming Communities of the Kaimur, Jaipur, 2004.
18. B. Subbarao- *Personality of India*, Baroda, 1958
19. Terra H. De & T.T. Paterson: The Studies on the Ice-Age in India & Associated Human Cultures, Washington, 1939.
20. Thapar, B.K.: Recent Archaeological Discoveries in India, UNESCO, 1985.
21. Wymer, J.J.: The Paleolithic Age, London, 1982.
22. B.K.Thapar- *Recent Archaeological Discoveries in India*, UNESCO Publication, 1985.
23. B.R.Allchin , D.K.Chakrabarti- *A Source Book on Indian Archaeology*, M.M Publishers Pvt. limited, New Delhi , 1979.
24. D.P Agrawal, D.K.Chakrabarti- *Essays in Indian Protohistory*, B.R. Publishing Co, Delhi, 1979
25. D.P.Agrawal- *The Archaeology of India*, Curzon Press, London. 1982.
26. R.E.M.Wheeler- *The Indus Civilization*, University Press, London, 1968.
27. R.E.M Wheeler- *Early India and Pakistan*, Thames and Hudson, London,, 1959.
28. W.A.Fairservis Jr- *The Roots of Ancient India*, The University if Chicago press, Chicago, 1975.
29. B.B.Lal- *The Earliest Civilization of South Asia*, Aryan Books International, New Delhi, 1979.
30. Erwin Newmayer- *Lines on Stone: Prehistoric Rock Art of India*, Manohar, New Delhi, 1993.