

National Museum Institute, New Delhi
Syllabus for Master's of Arts (M.A)
In
Archaeology

SEMESTER I (ALL CORE COURSES)

Paper 1: Introduction to Archaeology

Paper II: Field Methods in Archaeology

Paper III: Introduction to Sciences in Archaeology

SEMESTER II (ALL CORE COURSES)

Paper IV: Prehistoric cultures of India

Paper V: Protohistory of South Asia

Paper VI: Historical Archaeology of South Asia

SEMESTER III (Elective)

**(Choose Art and Architecture-I, Paleography, Epigraphy & Numismatics and Iconography
Or
World Prehistory, Bio Anthropology/Environmental Archaeology and Early Iron Age in
India)**

Paper VII: Art and Architecture of India (6th Cen. B.C.E. to 6th Cen. C.E.) - I

Or

Paper VII: World Prehistory

Paper VIII: Ancient Indian Palaeography and Epigraphy

Or

Paper VIII: Ancient Indian Numismatics

Or

Paper VIII: Bio-Anthropology or Environmental (Geo Archaeology)

Paper IX: Ancient Indian Iconography

Or

Paper IX: Early Iron Age of India

SEMESTER IV (Elective)

**(Choose Art and Architecture of India (600 C.E. To 1800 C.E.) II, Arts and Crafts of Ancient India,
Or
Ethnoarchaeology and Theories in Archaeology and Research Methodology)**

Paper X: Art and Architecture of India (600 C.E. to 1800 C.E.) -II

Or

Paper X: Ethnoarchaeology

Paper XI: Arts and Crafts of Ancient India

Or

Paper XI: Theories in Archaeology and Research Methodology

Paper XII: Dissertation (Compulsory)

SEMESTER I

National Museum Institute, New Delhi.
MASTER'S OF ARTS (M.A)
IN
ARCHAEOLOGY
SEMESTER I

Paper I : INTRODUCTION TO ARCHAEOLOGY

Course Objective:

Introduction to archaeology introduces first semester students to the concepts in archaeology, highlighting their applications in interpreting the human past. The definition, aims and scope of archaeology and its development as a discipline is introduced to the students. The nature of the archaeological record and the unique role of science in archaeology are explained. The course provides an understanding of cultural development and diversity from human origin to civilisation development.

Outcome:

On the completion of introduction to Archaeology students will develop a strong foundation on the basic understanding of the nature, development and value of archaeology as a discipline. It puts the students on a firm platform to acquire further deep knowledge in Archaeology.

Unit 1: Definition, Aims and Scope of Archaeology (10 hours)

- i. Archaeology as the study of the past: Definition, Aims, scope and methods
- ii. Introduction to types of Archaeology
- iii. Major Archaeological Finds and their significance
- iv. Archaeology and its relation with other sciences (Social, Physical and Natural)

Unit 2: Development of Archaeology (4 hours)

- i. Europe and America
- ii. In India

Unit 3 : Evolution of Culture (Origin of Humans to complex societies) (9 hours)

- i. Understanding of the term culture
- ii. Human Origin and its roots in African continent

- iii. Development of Palaeolithic Culture.
- iv. Development of Mesolithic culture (environmental changes and hunting-gathering adaptation around 10,000 BC)
- v. Transition from hunting gathering to agriculture
- vi. Origin of Neo/Chalco- Neolithic Revolution and other competing theories
- vii. Birth of civilizations in the World (theory; basic outline of World Civilizations)

Unit 4: Theoretical Approach in Archaeology (6 hours)

- i. Antiquarian period to Traditional Archaeology
- ii. New Archaeology/ Processual Archaeology
- iii. Post Processual Archaeology
- iv. Applications of Archaeological Theory

Unit 5: Significance of Archaeology (3 hours)

- i. Cultural Heritage, Monuments And Archaeological Legislations/Treasure Trove Act
- ii. Public Archaeology

Unit 6: Practicals

Practical comprises participation in an excavation for minimum of 20 days and learn the following on field: Visit to Museums. Students to get familiarised with artefacts in Archaeology galleries (in concurrence with the above said syllabus).

Recommended Readings:

- i. Binford, L.R. 1972 Introduction. An Archaeological Perspective, pp. 1-14. Seminar Press, New York.
- ii. Chakrabarti, DK. 1988. A History of Indian Archaeology: From the Beginning to 1947. New Delhi: Munsiram Manoharlal.
- iii. Daniel, Glyn, E. 1975. A Hundred and Fifty Years of Archaeology. London: Duckworth.
- iv. Dhavalikar, M K. 1984. Towards an Ecological Model for Chalcolithic Cultures of Central and Western India. Journal of Anthropological Archaeology 3. Pp- 133-158
- v. Fagan, B. 1988. In the beginning: An Introduction to Archaeology. Glenview: Scott, Foresman and company.
- vi. Flannery, K.V., and J. Marcus 1998 Cognitive Archaeology. In Reader in Archaeological Theory: Post-Processual and Cognitive Approaches, edited by D. Whitley, p. 35-48. Routledge, London.
- vii. Gardner, A. 2009 Agency. In the Handbook of Archaeological Theories, edited by R.A. Bentley, H.G. Maschner, and C. Chippindale, pp. 95-108. AltaMira Press. Lanham, MD.

- viii. Gifford-Gonzalez, Diane. 2011. Just Methodology? A Review of Archaeology's Debts to Michael Schiffer. *Journal of Archaeological Method & Theory* (2011) 18: 299 - 308.
- ix. Granet Marcel. 1930. *Chinese Civilization*. Trench Trubner and Co. London
- x. Hodder, Ian. 1992. *Theory and Practice in Archaeology*. London: Routledge.
- xi. Hodder, Ian. 1995. *Interpreting Archaeology: Finding Meaning in the Past*. New York: Routledge.
- xii. Hurcombe Linda 2007. *Archaeological artefacts as material culture*. New York: Routledge
- xiii. Kelly, RL. 1995. Chapter 3, Foraging and Subsistence. In *The Foraging Spectrum: Diversity in Hunter- Gatherer Lifeways*. Smithsonian Institution Press, Washington, D.C. (pp. 65-110)
- xiv. Lloyd Setan. 1984. *Archaeology of Mesopotamia from Old Stone Age to Persia Conquest*. Thames and Hudson. London
- xv. McIntosh Jane R. 2008. *Ancient Indus Valley: New Perspectives*. Abc Clío. California.
- xvi. McHenry, Henry M. 2009. Human Evolution in *Evolution: The First Four Billion Years*, edited by M. Ruse and J. Travis. Cambridge, Massachusetts: Harvard University Press. Pp. 256-280
- xvii. Murrey Margaret A. 1949. *Splendor that was Egypt General Survey of Egyptian Culture and Civilization*. Sidwick and Jackson Ltd. London
- xviii. Paddayya, K. 1990. *New Archaeology and Aftermath: View from Outside the Anglo-American World*. Pune: Ravish Publishers
- xix. Paddayya, K. 2014. *Multiple Approaches to the Study of India's Early Past: Essays in Theoretical Archaeology*. Aryan Books International
- xx. Renfrew, Colin and Paul Bahn 2006 *Archaeological: Theories and Methods and Practice*. Thames and Hudson. London
- xxi. Schiffer, M.B. 1995. *Behavioral Archaeology: First Principles*. Salt Lake City: University of Utah Press
- xxii. Shanks, M. 2008 Post-Processual Archaeology and After. In *Handbook of Archaeological Theories*, edited by R.A. Bentley, H.G. Maschner, and C. Chippindale, 133-144.

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Paper II: FIELD METHODS IN ARCHAEOLOGY

Course Objectives:

Introduces students to the process of discovery of sites, their excavations, analysis of the recovered archaeological evidences and recording. This course includes training in field methods including excavation techniques, the merits and limitations of Archaeological data and its interpretation methods.

Course Outcomes:

Students are introduced into field work and learn practical methods of doing Archaeological work.

Class Room Teaching

Methods of Data Retrieval

Unit 1. Field discoveries: aims and methods of Explorations. Chance discoveries: Map and satellite image studies: Village to village survey, salvage archaeology, geophysical methods, sampling methods, Photogrammetry, Geographical Information System (4 hours)

Unit 2. Chronology and Dating Methods

- i. Stratigraphy: Principles of stratification, factors and process of formation of layers, Identification and recording of strata. Reconstruction of cultural sequence
- ii. Determining the chronology and periods of the excavated remains
- iii. Other methods of Relative chronology: Typology, Statistical studies
- iv. Absolute methods of dating: Radiocarbon/ Potassium-argon, Thermoluminescence, AMS, Pollen analysis, Fluorine test, Obsidian hydration, Dendrochronology (4 hours)

Unit 3 Unearthing the sites: planning excavations: layout; techniques of Excavations - Vertical: Horizontal. Harris Matrix Method of Recording tools and equipments (2 hrs)

Unit 4. Excavation of sites: rock-shelter and prehistoric sites: burial, stupa, mud structures, pottery yard etc (2 hours)

Unit 5. Methods of recording the contexts of excavated remains: preparation of sections and plans, role of stratigraphy, three dimensional recording, site formation processes (2 hours)

Unit 6. Retrieval of botanical and other non-artifactual remains: Floatation technique, soil analysis, sample collection of various materials (2 Hours)

Unit 7. Underwater archaeology: Indian studies (3 Hours)

Unit 8. Post Excavation Analysis (4 Hours)

- i. Classification of objects / findings.
- ii. Reconstruction of socio-economic aspects, including contextual and site catchment analysis.
- iii. Recording methods (a) Drawing-pottery. site and antiquity, plan, elevation, section (b) Photography-indoor. elementary photochemistry (c) Surveying: instruments and their use, preparation of maps. cartography.
- iv. Scientific analysis of excavated remains
- v. Establishment of site laboratory

Unit 9. Report writing and Publication (3 Hours)

- i. Report writing
- ii. Preparation of text, drawings, photographs

iii. Preparation of dummy, proofreading

Practical work on Field:

Practical comprises of participation in an excavation for minimum of 20 days and learn the following on field.

- i. Excavation Techniques
- ii. Stratigraphy
- iii. 3D Recording
- iv. Trench Layout
- v. Section Drawing
- vi. Structure Drawing
- vii. Elevation and Plan
- viii. Pottery Drawing
- ix. Stone Tool Drawing
- x. Object Photography
- xi. Ceramic Analyses
- xii. Total Station
- xiii. Antiquity Registration
- xiv. Report writing

Recommended Readings:

- i. Atkinson. R.J.C. 1953. *Field Archaeology*. London: Longmans.
- ii. Barker. P. 1982. *Techniques of Archaeological Excavation*. London: Batsford.
- iii. Crawford. O.G.S. 1953. *Archaeology in the Field*. London: Phoenix.
- iv. Dances. W.S. 1985. *Archaeological Field Methods: An Introduction*. New Delhi: Surjeet Publications.
- v. Harris. E.C. 1979. *Principles of Archaeological Stratigraphy*. London: Academic Press.
- vi. Heizer F.R. (Ed.) (1959) *A Guide to Archaeological Field Methods*. California.
- vii. K.M. Srivastava (1981) *New Era of Indian Archaeology*, Cosmo Publications, Delhi
- viii. Miller D. (1985) *Artefacts as Categories: A study of Ceramic Variability in Central India*. Cambridge: Cambridge University Press
- ix. Schiffer. MB. 1991. *Archaeological Method and Theory*. *Journal of Field Archaeology* 18(4): 523-526

- x. Schiffer, MB. 1972. Archaeological context and systemic context. *American Antiquity* 37(2): 156-165
- xi. Rajan, K. 2002. *Archaeology: Principles and Methods*. Thanjavur: Manoo Pathippakam.
- xii. Raman K. V. 1991. *Principles and Methods in Archaeology*. Madras: Parthajan Publication.
- xiii. Wheeler R.E.M. (1954) *Archaeology from Earth*. Oxford: Clarendon Press.

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Paper III: Introduction to Sciences in Archaeology

Objective:

Archaeology is a multidisciplinary and interdisciplinary science. It is very essential for a student of Archaeology to have fundamental ideas of the application sciences in archaeology. This course introduces students to various scientific disciplines used for archaeological

research.

Course Outcomes:

Students are familiarised with basic descriptive technique and preliminary study of various categories of objects studied by archaeologists, such as plant fossils, human remains, rocks and minerals, sediments, map reading.

Unit 1: Role of Various Sciences in Archaeological Research (2 hrs)

Unit 2: Geoarchaeology (10hrs)

- i. Meaning and scope of Geoarchaeology and its relevance in archaeological studies
- ii. Geological time-scale - the position of the Quaternary Period within the standard geological column; plio-pleistocene boundary
- iii. Rocks -types of rocks: igneous, sedimentary and metamorphic, their characteristic features, origin and field structures, general information on rocks found in India
- iv. Minerals - definition and types, simple physical properties for distinguishing common minerals: colour, luster, transparency, hardness (Moh's scale of hardness), fracture and cleavage, crystalline forms of minerals and conditions of crystal formations
- v. General study of rock forming minerals: quartz, feldspar, mica
- vi. Minerals used in the manufacture of ancient objects - quartz, chalcedony, agate, jasper, flint, opal, amethyst, carnelian, mica, garnet, calcite, gypsum, tale, beryl, topaz, jade etc.
- vii. Weathering, soils and paleosols in archaeology: various land forms, nature and causes of weathering, rate of weathering, weathering and site formation, weathering and relative dating, soil micromorphology and archaeology, loess, paleosols
- viii. Fluvial environments in archaeology: river terraces and other formations, alluvial archaeology - understanding site formation and palaeo-environment: lacustrine deposits and sea level changes
- ix. Formation of caves and glacial deposits - moraines

Unit 3: Archaeoanthropology (5hrs)

- I. Meaning and scope of Anthropology and its relevance in archaeological studies
- II. Physical anthropology and its application to archaeology, measurements of skull and bones, prognathism, cranial capacity, etc

Unit :4 Environmental Archaeology (5hrs)

- i. Palaeo-environmental survey of India during Pleistocene and Holocene with examples
- ii. Palaeo-environmental indicators and varieties of evidences
- iii. Methods of study, sample collection, different techniques applied
- iv. Human- land relationships: understanding the impact of environmental change on early societies

Unit 5: Archaeozoology (5hrs)

- I. Application of archaeozoology in reconstruction of past
- ii. Survey of animal fossil remains and archaeozoological remains from archaeological sites in India
- iii. Palaeontology, fossilisation, taphonomy, diatom
- iv. Sample collection, processing, methods of analysis

Unit 6: Archaeobotany (5hrs)

- i. Application of archaeobotany in reconstruction of the past
- ii. Survey of plant remains and related evidences from archaeological sites in India
- iii. Study of wood, grains, impressions, fossils, coprolites, phytoliths, pollens and spores
- iv. Sample collection, processing, methods of analysis, plant DNA

Unit 7: Human Osteology and Palaeopathology (3hrs)

- i. Application of human osteology in construction of past and various methods of study
- ii. Survey of disposal of dead from archaeological sites in India
- iii. Collection methods, methods of cleaning and reconstruction, age and sex estimation, palaeopathology; DNA polymorphism; blood residual studies

Unit 8: Quantitative Methods and Information Science (5hrs)

- i. Place of quantitative methods in archaeological research
- ii. Introduction to simple statistics and its application in interpreting the past

Unit 9: Digital Landscapes (5 hrs)

- i. GIS
- ii. Remote Sensing
- iii. Digital Image Processing
- iv. Modelling and Simulation
- v. Maps and GPS based cartography

Recommended Reading:

- i. Badam, G.L. 1979. Pleistocene Fauna of India. Pune: Deccan College.

- ii. Baker. J and D. Brothwell. 1980. *Animal Diseases and Archaeology*. Academic Press: London
- iii. Bass. W.M. 1981. *Human Osteology: A laboratory and field manual of the Human skeleton*. 2nd edition, Columbia: Missouri Archaeological Society.
- iv. Biswas. A. K. 2005. *Science in Archaeology and Archaeological materials*. New Delhi v. D.K. Print World (P) Ltd.
- v. Bone. J.F. 1979. *Animal Anatomy and Physiology*. Reston: Reston Publishing Co.
- vi. Black. C.A. Evans. D.D. White. J.E. Ensminger. L.E and FE. Clark (Eds.). 1965.
- vii. *Methods of Soil Analysis, part I Physical and Mineralogical properties and part II*
- viii. *Chemical and Microbiological properties*. American Society of Agronomy. Inc. Madison. Wisconsin. USA
- vii. Brothwell. D. and E. Higgs (Eds.). 1969. *Science in Archaeology*. London: Thames and Hudson.
- viii. Brothwell, D. and AM. . Pollard. 2001. *Handbook of Archaeological Sciences*. New York: John Wiley and Sons.
- ix. Cornwall. I.W. 1974. *Bones for Archaeologists*. (revised edition). London: I.M. Dent and Sons.
- X. Deo. S.G. 2000 01. *Computer Applications in Archaeology: A review of work done at Deccan College, Bulletin of Deccan College Postgraduate and Research Institute*. Vol. 60 61: 137 142.
- xi. Deotare. B.C. 1995. *Pollen Recovery from minerogenic sediments: A methodological approach*. *Man and environment*. XX (2):101 105.
- Xii. Erdiman. G. 1969. *Handbook of Palynology*. New York: Hafner. Greig. James. 1989. *Handbook for Archaeologists No.4: Archaeobotany*. European Science Foundation, Strasbourg.
- xiii. Joshi. R.V. and B.C. Deodare. 1983. *Chemical Analysis of Archaeological Deposits from India*, Pune: Deccan College.
- xiv. Kajale. M.D. 1991. *Current status of Indian Paleoethnobotany: Introduced and Indigenous food plants with a discussion of the historical development of Indian Agriculture and agricultural system in general*. in *New Light on Early Farming*. Jane Renfrew (Ed.). Edinburgh: Edinburgh University press. pp. 15 190.
- xv Leiggi. Patrick and Peter May (Eds.). 1994. *Vertebrate Paleontological Techniques*. Vol. I, Cambridge University Press.
- xvi . Moore. P.D., Webb. J. A. and M.E. Collinson. 1992. *Pollen Analysis*. Oxford: Blackwell.
- Pearsall. D. 1989. *Paleoethnobotany Handbook of Procedures*. London: Academic press.
- xvii. Plenderleith. H.J 1965. *The Conservations of Antiquities and Works of Art*. London Oxford University press. Renfrew J. 1973. *Palaeoethnobotany*. London:

- xviii. Mathuen and Co. Reilly. P. and S. Rathz. (Eds.). 1992. Archaeology and the Information Age. London:
- xix. Routledge Romer. A.S. 1967. Vertebrate Paleontology. Chicago: University of Chicago press.
- xx. Schmid. E. 1972. Atlas of Animal Bones. London: Elsevier publishing Co. Singh. R. and I.R. Kajja. 1979. Map Work and Practical Geography. Allahabad: Cen
- xxi. Singh, R and L.R. Kajja, 1979, Map work and Practical geography, Geography, Allahabad: Central Book Depot. Traverse. A. 1988. Paleopalynology Boston: Unwin Hyman
- xxii. Traverse. A. 1988. Paleopalynology Boston: Unwin Hyman

Semester II

National Museum Institute, New Delhi.

MASTER OF ARTS (M.A.)

IN

ARCHAEOLOGY

SEMESTER 2

Paper IV: Prehistoric Cultures of India

Objective: This course enables students to identify prehistoric cultures through artifacts and other archaeological remains. It introduces the student to the idea of prehistory, its scope and objectives which is followed by sequential development of prehistoric Stone Age cultures and their geographical distribution in India. The environmental background and technological development in successive prehistoric cultural periods are also discussed in order to understand the changing economic activities, especially food gathering to food production and its spread.

Outcome: On completion of this paper a student gets an idea of associated stone tools and its development through time in Indian Prehistoric context.

Unit-1 Introduction (5 hrs.)

- i. Introduction to prehistory and scope of prehistoric studies and general framework of human evolution and development.
- ii. Environmental background and Human bio-cultural development.
- iii. Physical Features of Indian Subcontinent and their effects on prehistoric and Proto-historic cultures of India.
- iv. Prehistoric research in Global perspective.

Unit -II: Lower Paleolithic period (4 hours)

- i. Pioneering discoveries and major finds.
- ii. Tools and typological variation, raw-material for tools and technology of production. Primary context and secondary context sites.

- iii. Stratigraphy and chronological dimensions, Sohan industries and the Potwar geo-stratigraphy in perspective, Acheulean assemblages and geographical distribution
- iv. Type sites from different regions and major river valleys. Authors of Acheulian and issues of Hominin fossil ancestors in India. Potwar plateau (de Terra & T.T. Paterson's work, current understanding), Kashmir, Rajasthan, Delhi & Haryana, Central India with special reference to Bhimbetka & Adamgarh, south India with reference to Attirampakkam, Renigunta & Hunsgi-Baichbal valley, Chota Nagpur plateau, Uttar Pradesh, Maharashtra, Nepal, etc

Unit III: Middle Palaeolithic period (2 hours)

- i. Nevasa and Middle Palaeolithic culture, Tools and typological variation, Raw-materials for tools and technology of production.
- ii. Stratigraphy and chronological position.
- iii. Major Middle Palaeolithic sites in India, Primary and secondary context sites.
- iv. Evidence of cultural patterns and recent advances in research.

Unit IV: Upper Palaeolithic Period (2 hours).

- i. Upper Palaeolithic discoveries and problems of periodization
- ii. Tools and typological variation, Lithic raw-materials and technology of production.
- iii. Stratigraphy and chronological position, Regional nature of Upper Paleolithic cultural development.
- iv. Major Upper Paleolithic sites in India, Patne, Kurnool caves, evidence from Sri Lanka and Bangladesh, etc Important sites: Bagor and Tilwara, Langhnaj, Birbhanpur, Teri sites, Adamgarh. Bhimbetka, Sarai Nahar Rai, Mahadaha, Damdama

Unit- V Mesolithic Period (4 hours)

- i. Mesolithic cultural development and its scope.
- ii. The Holocene environment and Mesolithic Culture in India.
- iii. Tools and typological variation, Raw-materials for tools and technology of production. Stratigraphy and chronological position.
- iv. Major Mesolithic sites in India and regional variations in artifact assemblages. Sites: Bagor and Tilwara, Langhnaj, Birbhanpur, Teri sites, Adamgarh, Bhimbetka, Sarai Nahar Rai Mahadaha, Damdama

Unit VI : Prehistoric rock-art (4 hours)

- i. Prehistoric Art: Antiquity of prehistoric art in India.

ii.Evidence of prehistoric art: rock paintings, engravings, figurines. Important prehistoric rock-art sites.

iii.Prehistoric art and social dimensions.

Unit VII:

Practicals: this will run concurrent to the preceding units

i. Practical Identification of stone tools from different periods and Training in artifact drawing and documentation.

Books Recommended

1. Agrawal, D.P The Archaeology of India, Curzon Press, London. 1982
2. Agrawal, D.P and D.K.Chakrabarti- Essays in Indian Protohistory, B.R.Publishing Co, Delhi, 1979
3. Allchin, B.R.and D. K.Chakrabarti- A Source Book on Indian Archaeology, M.M Publishers Pvt. limited, New Delhi, 1979
4. Allchin. B, A.Goudie, K.T.M. Hegde- The Prehistory and Paleogeography of the Great Indian Thar Desert, Academic Press, London, 1978
5. Allchin, B. and R. Allchin- The Rise of Civilisation in India and Pakistan, Cambridge University Press, London, 1983
6. Dennell, Robin 2009 The Palaeolithic Settlement of Asia. Cambridge University Press, Cambridge
7. Dikshit, K.N. (Ed)-Archaeological Perspective of India since Independence, Bulletin of the Archaeological Society, (Special Issues) Nos.13-14, 1984.
8. Erwin Neumayer - Lines on Stone: Prehistoric Rock Art of India, Manohar, New Delhi, 1993.
9. Fuller, D. Q-2007 Neolithic Cultures in Pearsall, D.M., (Ed) Encyclopedia of Archaeology Academic press, New York:756 - 67
10. Misra, V. N. Indian Prehistory, Ecological perspective, Man and Environment
11. Paddayya, K2007 The Palaeolithic cultures in Pearsall, D.M., (Ed) Encyclopedia of Archaeology, Academic press, New York:767-78
12. Petraglia, D. M., and Ravi Korisettar, 1998.Early Human Behaviour in Global Context

13. Sankalia, HD.- Stone Age Tools: Their Techniques, Names and Probable Functions, Deccan College, Pune, 1982
14. H.D.Sankalia- Prehistory and Protohistory of India and Pakistan, Deccan college, Pune, 1974
15. Subbarao, B.- Personality of India, Baroda, 1958
16. B.K.Thapar, B. K.- Recent Archaeological Discoveries in India, UNESCO Publication, 1985
17. Wheeler, RE M- Early India and Pakistan, Thames and Hudson, London,, 1959

National Museum Institute, New Delhi.

MASTER OF ARTS (M.A.)

IN

ARCHAEOLOGY

SEMESTER 2

Paper V: PROTOHISTORY OF SOUTH ASIA

Course Objectives:

The course deals with the aspects of the archaeology of South Asia from Neolithic, through the Chalcolithic to the emergence of iron in the subcontinent. It throws light on the development and spread of agriculture during the Neolithic, through to the rise of Harappan urbanism in the third to second millennium BC. The syllabus has a shift of focus on Western India. Gangetic valley, Central India, and the South, with an examination of the Chalcolithic cultures that co- existed with Harappan urbanism and continued after its decline, and the developments that led to the emergence of the 'second urbanization' during the first millennium BC.

Course Outcome:

On the completion of this paper students will develop a strong foundation and critical understanding of the subject.

Unit I: Introduction (3 Hours)

- i. Protohistory: definition, scope, terminology
- ii. Origin of agriculture in West Asia and East Asia

Unit II : South Asian Neolithic Perspectives (7 Hours)

- i. Neolithic Cultures of Afghanistan, Baluchistan and Pakistan
- ii. Neolithic cultures of Kashmir Valley
- iii. Neolithic cultures of Vindhya and Ganges
- iv. Neolithic cultures of East and North east India
- v. Neolithic cultures of South India.

Type sites of Neolithic-Chalcolithic cultures of South India : Piklihal, Brahmagiri, Sanganakallu, Tekkalakota, Hallur, Maski, T.Narsipur

Unit III: Harappan Civilization (8 Hours)

- i. Harappan Cultural Tradition: general Framework and chronology:
- ii. Early Harappan Cultures of Sindh, Balochistan, Rajasthan, Haryana and Gujarat.
Important sites: Amri, Kot Diji, Harappa, Nausharo, Kulli, Mehri, Mehrgarh, Sarai Khola, Rakhigarhi, Bhirrana, Kunal
- iii. Harappan Socio-political and Religious Organisation
- iv. Decline of Harappan Civilization: various theories, causes and consequences.
- v. Late Harappan Cultures. Cemetery-II, Jhukar, Banawali, Hulas, Bhagavanpur, Mithatal, Rangpur, Gandhara grave, Lustrous Red Ware
- vi. A survey of excavated Harappan sites their Town Planning and Trade: Mohenjodaro, Harappa, Dholavira, Rakhigarhi, Banawali, Kalibangan, Lothal, Surkotada, Bagasra, Kuntasi, Nageshwar, Rangpur, Desalpur, Lothal.

Unit IV: South Asian Chalcolithic Perspectives (8 Hours)

- i. Chalcolithic culture of Rajasthan: Ahar and Ganeshwar Jodhpura
- ii. Chalcolithic culture of Ganga Plain: OCP and Copper Hoard and
- iii. Chalcolithic cultures with special reference to the sites of Sohagaura.
- iv. Lahuradewa and Narhan
- v. Chalcolithic culture of Central India: Kayatha and Malwa
- vi. Chalcolithic culture of Deccan: Savalda, Daimabad, Malwa.
- vii. Jorwe and Ramatirtha

Unit V: Iron Age and Megalithic (6 Hours)

- i.Origins of Iron in South Asia Problem and perspective
- ii Painted Grey ware Culture
- iii. Northern Black Polished ware Culture
- iv.Megalithic Cultures of India
- v.Important sites: Malhar, Hastinapur, Ahichchatra, Bhagavanpur, Atranjikhera, Mahurihari, Kunnatur, Adichanallur, Kodumanal, Brahmagiri, Maski.

Unit VI: Practical: (this will run concurrent to the preceding units). Training in identification of different ceramic types and other selected artifacts, training in pottery drawing and other methods of documentation.

Recommended Readings:

- i. Agrawal D.P. 2007. Indus Civilization: An Interdisciplinary Perspective. New Delhi: Aryan Books International.
- ii. Agrawal, D.P. 2000. Ancient Metal Technology and Archaeology of South Asia (A Pan Asian Perspective). New Delhi: Aryan Books International
- iii. Agrawal. D.P. 1982. Archaeology of India. Copenhagen: Scandinavian Institute of Asian Studies.
- iv. Agrawal D.P. and J.S. Kharakwal 2003. Bronze and Iron ages in South Asia. New Delhi: Aryan Books International.
- v. Agrawal D.P. and J.S. Kharakwal 2002.South Asian Prehistory. New Delhi: Aryan Books International.
- vi. Agrawal, D.P. and D.K. Chakrabarti (eds.). 1979. Essays in Indian Protohistory. New Delhi: D.K Publishers.

- vii. Allchin, F.R. and B. Allchin 1993. *The Birth of Civilization in India*. Revised ed. New Delhi: Penguin Books.
- viii. Allchin, Bridget and Raymond Allchin 1982. *Rise of Civilization in India and Pakistan*. Cambridge: Cambridge University Press.
- ix. Ansari, Z.D. & Dhavalikar, M.K. 1975. *Excavations at Kayatha, Pune*: Deccan College Postgraduate and Research Institute.
- x. Ansari Z.D. and M.K. Dhavalikar 1971. New light on the prehistoric cultures of Central India. *World Archaeology* 2(3):337-346.
- xi. Barker, Graeme. 1985. *Prehistoric farming in Europe*. Cambridge: University Press
- xii. Cohen, MarkNathan. 1978. *Food Crisis in Prehistory: Overpopulation and Origins of Agriculture*. New Haven: Yale University Press
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National Museum Institute, New Delhi
MASTER OF ARTS (M.A.)
IN
ARCHAEOLOGY
SEMESTER 2

Paper VI: Historical Archaeology of South Asia

Course Objectives: The objective of study of this paper in the course is to develop understanding of archaeology of the historical period in South Asia including the formation of states, building activities, economic activities, trade and commerce, writing system, coinage and such other proliferations of civilization with development of social order as made clear through the archaeological sources.

Course outcomes: After the completion of the course students would be able to identify coins, inscriptions, scripts, ceramic types and shapes, brick sizes, sculptures, terracotta and minor antiquities of different periods and would also be able to reconstruct the history on the basis of such material.

Unit 1: Introduction and Beginning of Historical Archaeology (4 hours)

1. Definition and Scope,
2. Brief review of archaeology of pre-Mauryan period from 12th century B.C.E. to 4th century B.C.E. and contemporary cultural assemblage including pottery of the sub-continent.
3. Technology and elements of economy- historical urbanization.
4. Archaeology of NBPW and other contemporary wares, use of scripts and other salient elements: 12th century B.C.E. to 4th century B.C.E.

Unit 2: Early Historical Archaeology (3 hours)

5. Archaeology of Maurya and post-Mauryan period (late 4th century B.C.E. to end of 3rd century C.E.).
6. Archaeology of the period of the Gupta and other contemporary dynasties (4th century C.E. to 6th century C.E.).

Unit 3: Archaeology of Early Medieval times (2 hours)

7. Archaeology of 7th century C.E. to 10th century CE.. in different regions.
8. Archaeology of 11th century C.E. to 13th century CE.. in different regions.

Unit 4: Archaeology of Medieval India (2 hours)

9. Archaeology of 14th century C.E. to 16th century CE.. in different regions.
10. Archaeology of 17th century C.E. to 19th century CE.. in different regions.

Unit 5: Important excavated sites (15 hours)

1. Cultural sequence of important sites:

Sites for detailed study

1. Taxila
2. Ahichchhatra
3. Hastinapur
4. Kausambi
5. Sisupalgarh
6. Purana qila
7. Sarnath
8. Hampi
9. Lalkot
10. Sannati/Kanaganahalli
11. Nagarjunakonda
12. Fatehpur Sikri
13. Arikamedu
14. Adam

Sites for general study

1. Rajghat
2. Mathura
3. Kumrahar
4. Sravasti
5. Brahmagiri
6. Banavasi
7. Champaner
8. Rangmahal
9. Nalanda
10. Ambari
11. Alagankulam
12. Semthan
13. Korkai
14. Thanesar (Harsha-ka-Tila)
15. Vadgaon Madhavpur
16. Velha Goa
17. Vadnagar

Recommended Readings:

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- (II) Dhavalikar, MK. . 1999. Historical Archaeology of India. Books & Books, New Delhi
- (III) Ghosh, A. 1973. The City in Early Historical India, Simla
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- (vi) Mani, B.R. 1997. Delhi - Threshold of the Orient. Aryan Books International, Delhi
- (Vii) Srivastava, KM. . 1982. New Era of Indian Archaeology. Cosmo Publications, Delhi.
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Semester III

National Museum Institute, New Delhi.

MASTER OF ARTS (M.A.)

IN

ARCHAEOLOGY

SEMESTER 3

Paper VII: Art and Architecture of India (6th Cen. B.C.E. to 6th Cen. C.E.) - I

Course Objectives:

The objective of this course is to introduce the students to the development of art tradition in India up to the 6th century. C.E.

Course Outcomes:

Students get a comprehensive idea of the monuments and sculptures of India covered in the course.

Unit 1: Introduction to traditions of Art and Architecture in India (4 hrs)

- i Introduction to Indian Art and Architecture
- ii. Art and Architecture of Mauryan Period including sources, Interaction between indigenous and foreign influences of art.

Unit 2: Emergence and Development of Buddhist Architecture (6 hrs)

- i. Origin of Stupa Architecture.
- ii. Stupa Architecture - Pre-Mauryan and Mauryan periods.
- iii. North India, Central India, Deccan and Gandhara
- iv. Viharas and Chaityas.

Unit 3: Emergence and Development of Rock-cut Architecture (7 hrs)

- i. Origin of Rock-cut Architecture.
- ii. Eastern India, Western Deccan, Eastern Deccan, Central India.

Unit 4: Emergence and Development of Temple Architecture (6 hrs)

- i. Origin of Temple Architecture- Theoretical aspects.
- ii. Concept and symbolism of Temple.
- iii. Archaeological remains of structural temples.
- iv. Temple Architecture during the Gupta period.
- v. Temple Architecture during the Vakataka period.

Unit 5: Emergence And Development of Sculptural Art and Paintings - (6 hrs)

- i. Sculptural Art and Paintings -Concept and Symbolism.
- ii. Terracottas, Ivories and Bronzes
- iii. Paintings: Ajanta and Bagh
- iv. Stone sculptures-Gandhara, Mathura, Sarnath and Andhra schools of Art.
- v. Art during the Gupta- Vakataka period.

Unit 6: Field Visit and Practical Training

- i. Visit to Western Indian Rock-Cut caves
- ii. Practical training of preparation of Plan

Recommended Readings:

- i. Barua, B. 1934-37. Barhut Vol. I-III. Calcutta: Indian Research Institute.
- ii. Cunningham, Alexander 1966. The Bhilsa Topes. Varanasi: Indological Book Corporation.
- iii. Cunningham, Alexander 1965. The Stupa of Bharhut. Varanasi: Indological Book Corporation.

- iv. Dallapiccola, L.S.Z. Lallemand. 1980. *The Stupa: Its Religious, Historical, and Architectural Significance*. Wiesbaden: Franz Steiner Verlag.
- v. Dehejia, Vidya 1972. *Early Buddhist Rock Temples: A Chronological Study*. London: Thames and Hudson.
- vi. Dehejia, Vidya 1997. *Discourse in Early Buddhist Art*. New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd.
- vii. Dhavalikar, M.K. 1977. *Masterpieces of Indian Terracottas*. Bombay: D.B. Taraporevala Sons and Co. Pvt. Ltd.
- viii. Dhavalikar, M. K. 1985. *Late Hinayana Caves of Western India*. Pune: Deccan College.
- ix. Dhavalikar, M. K. 2004. *Satavahana Art*. Delhi: Sharada Publishing House.
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- xxi. Sharma, R.C. 1984. *Buddhist Art of Mathura*. New Delhi: Agam Kala Prakashan.
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- xxiii. Snodgrass, Adrian 1992. *The Symbolism of the Stupa*. Delhi: Motilal Banarsidass
- xxiv. Stone, Elizabeth Rosen 1994. *The Buddhist Art of Nagarjunakonda*. Delhi: Motilal Banarsidass
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- xxv. Williams, Joanna 1982. *The Art of Gupta Indian-Empire and Province*. New Jersey: Princeton

National Museum Institute, New Delhi.

MASTER OF ARTS (M.A.)

IN

ARCHAEOLOGY

SEMESTER 3

Paper VII: World Prehistory

Objectives: The objective of this paper is to initiate students to major prehistoric cultural development in most parts of the world from the beginning of human origin. It makes them aware of major theoretical and methodological issues of prehistoric study. The syllabus examines most salient archaeological evidence that is available for understanding the prehistoric cultural developments in Africa, Europe, West Asia, South East Asia and China through the Palaeolithic period

Course Outcome:

Students get an idea of the Prehistory of the world.

Unit 1: Introduction (09 Hours)

- i. Meaning and scope of prehistory, History and development of prehistoric archaeology in a broader context.
- ii. Introduction to prehistoric cultural sequence Prehistory and geological time frame, Human antiquity and fossil records.
- iii. Prehistoric stone tool Nomenclature, techniques of manufacturing tools
- iv. Stone Age primary and secondary sites.

Unit 2: Lower Paleolithic Culture (07 Hours)

- i. Lower Palaeolithic Cultures in Africa, Europe and West Asia.
- ii. Pre-Acheulian and Acheulian developments.
- iii. Significance of Olduvai Gorge in the Palaeolithic study.
- iv. Salient features of the Lower Palaeolithic in Europe.
- v. Acheulian and Non-Hand axe industries.
- vi. Cultural patterns of the early hominins.
- vi. Salient features of Prehistory of China and Southeast Asia
- vi. Salient features of Lower Paleolithic culture in China and in Southeast Asia.

Unit 3: Middle and Upper Paleolithic Cultures (7 Hours)

- i. Salient features of Middle and Upper Palaeolithic cultures of North Africa and Europe;
- ii. Stratigraphy and chronology
- iii. Hominin fossil records
- iv. Near Modern and Modern Humans

v. Modern human expansion and migration.

vi. Emergence of Upper Paleolithic Art.

Unit 4: Mesolithic and Neolithic Culture (5 Hours)

i. Mesolithic culture of Europe and managing the changes in subsistence resources

ii. Mesolithic/Epi-palaeolithic developments in west Asia.

iii. Neolithic culture and the beginning of domestication of plants and in West Asia.

iv. Early domestication in other parts of the world: China, Europe, Africa, North and Meso-American centers.

Unit 5: Australia and America's Pre History (4 Hours)

i. Antiquity of Prehistoric Americas, Prehistoric remains and Palaeo-Indians, Prehistoric remains in Sahul and their Antiquity

Unit 6: Practical training in identification and drawing of Stone tools, visit to Stone Age primary and secondary sites (this will run concurrent to the preceding units)

Recommended readings:

Books:

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- ii. Barham. Lawrence and Mitchell. Peter Barham 2008. The First Africans. Cambridge. Cambridge University Press.
- iii. Bellwood. P. 2007. Prehistory of the Indo-Malaysian Archipelago. Revised edition. Canberra: ANU Press.
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- v. Chazan. M. 2008. World Prehistory and Archaeology: Pathways through Time: Addison-Wesley
- vi. Debénath. A. and H. I. Dibble. 1994. Handbook of Paleolithic typology- Vol. I: Lower and middle palaeolithic of Europe. Philadelphia: The University Museum.
- vii. Delson, Eric, Ian Tattersall. J. A. Van Couvering, and A. Brooks. 2000. Encyclopaedia of Human Evolution and Prehistory. New York and London: Garland Publishing
- viii. Dennel. R. W. 2009. Palaeolithic Settlement of Asia. Cambridge: Cambridge University Press.
- ix. Gamble. C. and C. Gamble. 1999. The Palaeolithic societies of Europe. Cambridge world archaeology. Cambridge. UK. : New York: Cambridge University Press.
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- xiii. Sharon. G. 2007. Acheulian Large Flake Industries: Technology, Chronology, and Significance. BAR international series. Oxford: BAR.

Research Papers:

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- iii. Bar-Yosef, O. and A. Belfer-Cohen 2013. Following Pleistocene road signs of human dispersals across Eurasia. *Quaternary International* doi:10.1016/j.quaint.2011.07.043
- iv. Bar-Yosef, O. and L. Meignen. 2001. The chronology of the levantine Middle Palaeolithic period in Retrospect. *Bulletin et Mémoire de la Société d'Anthropologie de Paris*. 2. série 13:269-289
- v. Bar-Yosef, O. and S. L. Kuhn. 1999. The Big Deal about Blades: Laminar Technologies and Human Evolution. *American Anthropologist* 101:322-338.
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- vii. Braun, D. R., T. W. Plummer, P. W. Ditchfield, J. V. Ferraro, D. N. Maina, L. C. Bishop, and R. Potts. 2008a. Oldowan behavior and raw material transport: perspectives from the Kanjera Formation. *Journal of Archaeological Science* 35 2329-2345.
- viii. Bridgland, D. R. P. Antoine, N. Limondin-Lozouet, J.I Santisteban, R. Westaway, and M.J. White. 2006 The Palaeolithic occupation of Europe as revealed by evidence from the rivers data from IGCP 449. *Journal of Quaternary Science* 21:437-455.
- ix. Diez-Martin, F 2006. After the African Oldowan: The Earliest Technologies of Europe. in *The Oldowan: Case Studies into the Earliest Stone Age*. Edited by N. Toth and K. Schick. pp. 129-151. Gosport: Stone Age Institute.
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- xx. Mishra, S. 2008. The Lower Palaeolithic: A Review of Recent Findings. *Man and Environment* 33:14-29.
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- xxii. 2010. India and Java: Contrasting Records. *Intimate Connections. Quaternary International*.
- xxiii. Mishra, S. M. J White, P. Beaumont, P. Antoine, D. R. Bridgland, N. Limondin-Lozouet, J. I Santisteban, D. C. Schreve, A. D. Shaw, F. F Wenban-Smith, R. W. C Westaway, and T.
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- xxv. Norton, Christopher J. and D. R. Braun. 2010. *Asian Paleoanthropology: From Africa to China and Beyond*. Springer
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(MASTER OF ARTS (M.A.))

IN

ARCHAEOLOGY

SEMESTER 3

Paper VIII: ENVIRONMENTAL ARCHAEOLOGY (GEOARCHAEOLOGY)

Course Objectives:

The objective of this course is to introduce students to the studies of geoarchaeology. The course introduces the student to topographical evolution and formation of different rocks and mineral types.

Course Outcomes:

At the end of the course students will be well acquainted with different types of landscapes, rocks and minerals which gives a very strong backup for prehistoric studies and explorations.

Unit 1: Introduction to Geoarchaeology (3 Hours)

- i. Definition, concepts and development of Geoarchaeology
- ii. Geological time-scale - the position of the Quaternary Period within the standard geological column: plio-pleistocene boundary

Unit 2: Landform Evolution (6 Hours)

- i. Identifying the natural Processes
 - a. Slope
 - b. Fluvial
 - c. Glacial
 - d. Acolian
 - e. Lacustral
- ii. Post depositional features
 - a. Soils and sediments
 - b. Calcrete formation
 - c. Ferricretes
 - d. Weathering

Unit 3: Rocks (6 Hours)

- i. Types of rocks: igneous, sedimentary and metamorphic, their characteristic features, origin and field structures, general information on rocks found in India
- ii. Minerals - definition and types, simple physical properties for distinguishing common minerals: colour, luster, transparency, hardness (Moh's scale of hardness), fracture and cleavage, crystalline forms of minerals and conditions of crystal formations.

Unit 4: Methods (6 Hours)

- i. Field techniques (Physical and Chemical)
 - a. Regional scale
 - GIS and Remote sensing
 - Map studies
 - b. Site specific
 - Resistivity
 - Magnometry
 - Section description
 - Sampling
- ii. Laboratory techniques
 - Grain size analysis
 - Soil characterization

Mineralogy
Phosphate analysis
Stable Isotope studies

iii. Absolute and Relative Dating methods

Unit 5: Cultural Ecology (6 Hours)

- i. Human responses to changing environment
 - a. Palaeo landscape
 - b. Palaeoclimate
 - c. Sea level changes
- ii. Origin, growth and decay of cultures
- iii. Human Impact on landscape

Unit 6: Regional Studies (5 Hours)

- a. India
- b. Practicals: Identification of different types of Rock and Minerals (this will run concurrent to the preceding units)

Recommended Reading:

Basic Texts:

- i. Goldberg. P.. and R. I Macphail. 2006. Practical and Theoretical Geoarchaeology. Oxford: Blackwell.
- ii. Holliday. Vance T. 2004. Soils in Archaeological Research. Oxford: Oxford University Press.

Additional Readings:

- i. Abeyratne. M. N. A. Spooner. R. Grun. and I.M. Head. 1997. Multidating studies of Batadomba Cave. Sri Lanka. Quaternary Science Reviews 16:243-255.
- ii. Ajit Prasad. P. 2004. Holocene Adaptations of the Neolithic and Chalcolithic settlements in North Gujarat in Yasuda and Shinde edited Monsoon and Civilization, pp- 115-132
- iii. Bettis, E. A. I. D. W. Benn. and E. R Hajic. 2008. Landscape evolution, alluvial, environmental history, and the archaeological record of the Upper Mississippi River Valley. Geomorphology 101:362-377.

- iv. Boyd, W. E. 2008. Social change in late Holocene mainland SE Asia: A response to gradual climate change or a critical climatic event? *Quaternary International*.
- v. Bridgland, D. R., and R. Westaway. 2008. Climatically controlled river terrace staircases: A worldwide Quaternary phenomenon. *Geomorphology* 98:285-315.
- vi. Brooks, N. 2004 "Beyond collapse: the role of climatic desiccation in the emergence of complex societies in the middle Holocene." in *Environmental Catastrophes in Mauritania. The Desert and the Coast. Abstract Volume and Field Guide. Mauritania. 4-18 January 2004. First Joint Meeting of ICSU Dark Nature and IGCP 490. Edited by S. Leroy and P. Costa. p.p 26-30.*
- vii. Butzer, K. W. 2008. Challenges for a cross-disciplinary geoarchaeology: The intersection between environmental history and geomorphology. *Geomorphology* 101: 402-411.
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- xi. Lape, Peter V. and Chao Chin-yunga. 2008. Fortification as a Human Response to Late Holocene Climate Change in East Timor in *Archaeology in Oceania. Vol. 43. No. I, Climate Change and Archaeology in the Pacific - Part II*
- xii. Maloney, B. K. 1999. Late Holocene Climatic Change in Southeast Asia: The Palynological Evidence and Its Implications for Archaeology in *World Archaeology, Vol. 24, No. I, pp.25-34*
- xiii. Marriner, N., and C. Morhange. 2007 Geoscience of ancient Mediterranean harbours. *Earth- Science Reviews* 80:137-194.
- xiv. O'Sullivan, P. B. 2008. The 'collapse' of civilizations: what palaeoenvironmental reconstruction cannot tell us, but anthropology can. *The Holocene* 18.
- xv. Pappu, R. S. 1995. The Contribution of Earth Science to the Development of Indian Archaeology, in *Quaternary Environments and Geoarchaeology of India. Edited by S. Wadia, R. Korisettar, and V. S. Kale, pp. 414-434. Bangalore: Memoirs of the geological Society of India* 32.
- xvi. Panin, A. V. and M. A. Bronnikova 2014. Human dimensions of palaeoenvironmental change: Geomorphic processes and geoarchaeology. *Quaternary International* 324(0): 1-5.
- xvii. Pollard, A. M. 1999 *Geoarchaeology: an introduction. Geological Society. London. Special Publications* 165:7-14.
- xviii. Redman, Charles I. 1999. *Human Impact on Ancient Environment. The University of Arizona Press. Tuscon.*

- xix. Rosen Arlene M. and Isabel Rivera-Collazo. 2012. Climate change, adaptive cycles, and the persistence of foraging economies during the late Pleistocene/Holocene transition in the Levant in Proceedings of the National Academy of Sciences of the United States of America. Vol. 109, No. 10. pp. 3640-3645
- xx. Tainter, J. A. 1988. The Collapse of Complex Societies. Cambridge: Cambridge University Press
- xxi. Wilson, L. (2011). The role of geoarchaeology in extending our perspective. Geological Society, London. Special Publications 352(1): 1-9.
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MASTER OF ARTS (M.A.)

IN ARCHAEOLOGY

SEMESTER-3

Paper- VIII: Ancient Indian Epigraphy and Palaeography

Course Objectives: The objective of this course is to learn scripts in Brahmi and Kharosthi, development of script through time, paleography of Northern and Southern Indian Scripts and study of select inscriptions. The syllabus makes students aware of the importance of epigraphy as one of the major sources for the reconstruction of the history of a country.

Course Outcomes:

After the completion of the course, students will be successfully able to decipher and read scripts and date inscriptions with the help of paleographic features of the script. Students will also be able to interpret the inscription in its socio-political, religious and economical context.

Unit 1: Introduction to Epigraphy and Palaeography (3 Hours)

- i. Epigraphy and Paleography: Terminology, Scope and Importance in reconstruction of History
- ii. Historiography of Epigraphic Studies
- iii. Antiquity of Writing in Ancient India
- iv. Materials and Techniques of Writing
- v. Theories of Origin of Brahmi and Kharoshthi Scripts
- vi. Orthography and Decipherment of letters and Numerals of Brahmi and Kharoshti scripts

Unit 2: Palaeography - North Indian Scripts (5 Hours)

- i. Early Brahmi
- ii. Sunga, Kushana and Kshatrapa inscriptions characters
- iii. Gupta and post-Gupta characters
- iv. Box-headed and Nail-headed characters

Palaeography - South Indian Scripts (4 Hours)

- i. Tamil or Brahmi
- ii. Satavahana, Ikshvaku and Kadamba inscriptions
- iii. Origin and development of Telugu-Kannada script. Vatteluttu
- iv. Pallava-Grantha

Unit 3: Edicts of Ashoka (5 Hours)

- i. Nature, Geographic Distribution, Categories and Language of the Edicts.
- ii. Decipherment of Major Rock Edicts (Girnar Version) Nos I, II, IV, VI, IX and XII

Unit 4: Study of Inscriptions of Historical and Cultural Importance (13 Hours)

- i. Sohgaura Copper Plate Inscription
- ii. Besnagar Garuda Pillar Inscription of Heliodorus
- iii. Hathigumpha Inscription of Kharavela
- iv. Naneghat Inscription of Naganika
- v. Nasik Cave Inscription of Nahapana
- vi. Nasik Cave Inscription of Vasithiputa Pulumavi. 19th Regnal Year
- vii. Junagarh Inscription of Rudradaman
- viii. Nagarjunakonda Inscription of Virapurisadatta. 6th Regnal Year
- ix. Chatrayashthi inscription of Kaniska I
- x. Mathura inscription of Huvishka
- xi. Allahabad Prashasti of Samudragupta
- xii. Mathura Inscription during the Reign of Chandragupta II, GE 61
- xiii. Aihole Inscription of Pulakesin II
- xiv. Bansakheda copper plate of Harshavardhana

Unit 5 : Introduction to Arabic and Persian Inscriptions (2 hrs.)

- Broad Characteristics of main varieties of Arabic and Persian inscriptions found in Indo-Islamic Calligraphy
- Arabic and Persian Calligraphy with special reference to Kufic, Nask, Thulth, Nastaliq, Tughra, Shikasta, Mukus

Unit 6: Practical (4 hrs)

- i. Training of Estampage Technique
 - ii. Training in reading and writing of ancient scripts
 - iii. Transliteration and reading ancient Indian scripts of different periods
- (This unit will run concurrent to the previous units)

Recommended Readings:

- i. Allchin. F.R. and K.R. Norman 1985. Guide to the Ashokan Inscriptions. South Asian Studies, 1: 49-50.
- ii. Bhandarkar. D.R. 1935-36. A List of the Inscriptions of Northern India in Brahmi and its Derivative Scripts. from about 200 B.C. Appendix to Epigraphia Indica vols. 19-23.
- iii. Bhandarkar. D.R. 1981 Inscriptions of the Early Gupta Kings (Bahadurchand Chhabra and Govind Swamirao Gai eds.).Corpus Inscriptionum Indicarum vol. III. New Delhi: Archaeological Survey of India.
- iv. Bühler. George 1892. A New Variety of the Southern Maurya Alphabet. Wiener Zeitschrift für die Kunde des Morgenlandes (Vienna Oriental Journal), vol. 6: 148-156.
- v. Bühler. George 1898. On the Origin of Indian Brahma Alphabet. Strassburg: Karl .J Trubner.
- vi. Bühler. George 1959. Indian Palaeography. Calcutta: Indian Studies.
- vii. Dani, Ahmad Hasan 1963. Indian Palaeography. Oxford: Clarendon Press. Epigraphia Indica 1892-1940. Vol. -I XXV. Archaeological Survey of India.
- viii. Hultzsch. D. 1969(Reprint). Corpus Inscriptionum Indicarum. Vol.I. Varanasi: Indological Book House.
- ix. Gokhale. S. Purabhilekhavidya. Mumbai: Sahitya Sanskruti Mandal.
- x.. Goyal. S.R. 2005. Ancient Indian Inscriptions. Jodhpur: Kusumanjali Book World.
- xi. Khare. M.D. 1967. Discovery of a Vishnu Temple near the Heiodorus Pillar. Besnagar. District Vidisha (M.P.). Lalit Kala (13): 21-27.
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- xiii. Mangalam. S.J. 1990. Kharoshti Script. Delhi: Eastern Book Linkers.
- xiv. Mehendale. M.A. 1948. Historical Grammar of Inscriptional Prakrits. Poona: Deccan College Post Graduate and Research Institute.
- xv. Mchendale. M.A. 1948. Asokan Inscriptions in India (Linguistic Study together with Exhaustive Bibliography). Bombay: University of Bombay.
- xvi. Mirashi. V.V. 1981. The History and Inscriptions of the Satavahanas and the Western Kshatrapas. Bombay: Maharashtra State Board of Literature and Culture.
- xvii. Pandey. R. 1957. Indian Palaeography. Delhi: Motilal Banarasidas.
- xviii. Raghunath. K. 1998. Ikshvakus of Vijaya Puri: Study of the Nagarjunakonda Inscriptions.Delhi: Eastern Book Linkers.
- xix. Ramesh. K.V. 1984. Indian Epigraphy. Delhi: Sundeep Prakashan.
- xx.. Rea. Alexander 1997 (Reprint). South Indian Buddhist Antiquities. Archaeological Survey of India New Imperial Series Vol. XV. New Delhi: Director General. Archaeological Survey of India.
- xxi. Salomon. Richard 1998. Indian Epigraphy. New Delhi: Munshiram Manoharlal

Publishers Pvt. Lid.

- xxii. Shastri. A.M. 1996-97. Some Observations on the Origin and Early History of the Vikrama Era. Prachya Pratibha. vol. XVIII: 1-51.
- xxiii. Shastri. A.M. 1966. The Saka Era. Panchal. vol. 9: 109-132.
- xxiv. Sircar. D.C. 1965. Indian Epigraphy. Delhi: Motilal Banarasidas.
- xxv. Sircar. D.C. 1986 (3rd edition). Select Inscriptions. Vol.I Delhi: Asian Humanities Press.
- xxvi. Srinivasan. P.R. And S. Sankaranarayanan 1979. Inscriptions of the Ikshvaku Period. Hyderabad: Andhra Pradesh Government.
- xxvii. Woolner. Alfred C. 1934. Asoka Text and Glossary (parts I and II). Lahore: The University of the Punjab. Lahore.

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MASTER OF ARTS (M.A.)
IN
ARCHAEOLOGY
SEMESTER 3

Paper VIII: Ancient Indian Numismatics

Course Objectives: This course introduces the students to Ancient Indian coins and currency systems. It enables them to study the development of coinage through time.

Course Outcomes:

On completion of the course students will be able to identify and decipher the coins. They will be able to understand the socio-political background that occurs through time and the impact of coinage on the economic system prevalent in ancient India.

Unit 1: Introduction to Numismatics (3 Hours)

- i. Origin and development of coinage in Ancient India.
- ii. Terminology, Scope and Importance in the reconstruction of socio-cultural and economic History
- iii. Archaeological finds from excavations, Stratigraphic relevance, Stray findings, Hoards, Private and Public Collections

Unit 2: Ancient Indian Coinage (15 Hours)

- i. Categories of coins and weight standard from historical texts: Shatamana, Vimshatik and Karshapana series.
- ii. Punch-Marked Coins: Early Un inscribed Copper Cast Coins
- iii. Coins of Indo-Greek, Indo-Scythian and Indo-Parthian dynasties, Tribal coins, Coins of Cities and States
- iv. Coinage of the Kushanas
- v. Coins of the Satavahanas
- vi. Coins of the Western Kshatrapas: Kshaharata and Kardamaka Rulers

- vii. Coins of the Sangama Period: Chera, Chola and Pandya
- viii. Roman Coins in India
- ix. Coins of the Guptas
- x. Indo-sassanian coins.
- xi. Coins of Early-medieval period

Unit 3: Metallurgy, Minting and Analyses of Coins (6 Hours)

- i. Metallurgy of Coins
- ii. Technique of minting coins: Punch-marked, cast, die-struck
- iv. Destructive and Non-destructive methods of Analysis

Unit 4: Practical Training (8 Hours)

- i. Coin Cleaning: Treatment and Preservation
- ii. Identification of coin, preparation of coin catalogue and report writing

Recommended Readings:

- i. Alan, J. 1935. Catalogue of Coins of Ancient India, London: British Museum.
- ii. Altekar, A.S., 1937. Catalogue of Coins of the Gupta Empire, Varanasi: Numismatic Society of India.
- iii. Bhandarkar, D.R., 1921. Carmichael Lectures on Ancient Indian Numismatic, Calcutta: Calcutta University.
- iv. Bharadwaj, H.C., 1979. Aspects of Ancient Indian Technology, Delhi: Motilal Banarasidas.
- v. Chattopadhyaya, Bhaskar 1967. The Age of the Kushanas - A Numismatic Study, Calcutta: Punthi Pustak.
- vi. Chattopadhyaya, Brajdulal 1977. Coins and Currency System in South India, Delhi: Munshiram Manoharlal.
- vii. Dasgupta, K.K. 1974. A Tribal History of Ancient India - A Numismatic Approach, Calcutta: Nababharat Publications.
- viii. Datta, Mala 1990. A Study of the Satavahana coinage, Delhi: Harman Publishing House.
- Dhavalikar, M.K. 1975. Pracheena Bharatiya Nanakshastra, Pune: Maharashtra Vidrapeeth Granthanirmiti Mahamandal.
- ix. Handa, Devendra 2007. Tribles Coins of Ancient India, New Delhi: Aryan Books International.
- x. Elliot, W. 1970. (Reprint) Coins of South India, Varanasi: Indological Book House.
- xi. Gardener, P. 1886. The Coinage of the Greek and Scythic Kings of Bactria and India in British Museum, London: British Museum.

- xii. Gokhale, Shobhana 1981. New Discoveries in the Satavahana Coinage. JNSI vol. XI.III: 54-59.
- xiii. Goyal, S.R. 1995. Dynastic Coins of Ancient India, Jodhpur: Kusumanjali Book World.
- xiv. Gupta, P.I. 1979. (2nd Revised Edition) Coins. New Delhi: National Book Trust.
- xv. Gupta, P.L. 1981. Coins: Source of Indian History. Ahmedabad: B. Institute of Learning and Research.
- xvi Gupta, P.L. and Sarojini Kulashreshtha 1993. Kushana Coins and History, New delhi: D. K. Publishers.
- xvii. Gupta, PL.. and T.R. Hardaker 1985. Ancient Indian Silver Punch-Marked Coins of the Magadha
- xviii. Maurya Karshapana Series. Nasik: Indian Institute of Research in Numismatic Studies.
- xix. Jha, A.K. 1998. Observations on the Principles of Typology: A Study of' Ancient Indian Coinage, in Ex Moneta: Essays on Numismatics in Honour of Dr. David W. Macdowall (A.K. Jha and Sanjay Garg eds.) Volume I, pp. 33-43. New Delhi: Harman Publishing House.
- xx. Jha, Amiteshwar and Dilip Rajgor 1994. Studies in the Coinage of Western Kshatrapas. Anjaneri: Indian Institute of Research in Numismatic Studies.
- xxi. Krishnamurti, R. 1997. Sangam Age Tamil Coins. Madras: Garnet Publishers. Lahiri, A.N. 1965. Corpus of Indo-Greek Coins. Calcutta Journal of the Numismatic Society of India. Varanasi .
- xxii. Mangalam, S.J. 2001. Shankar Tiwari Collection of Early Coins from Narmada Valley. Bhopal: Directorate of Archacology and Museums, Government of Madhya Pradesh.
- xxiii. Numismatic Digest A Journal Published by Indian Institute of Research in Numismatic Studies, Anjaneri (Nasik).
- xxiv. Rajgor, Dilip 2001. Punch-Marked Coins of Early Historic India. California: Reesha Books International.
- xxv. Rapson, E.J. 1908. Catalogue of Coins of Andhra Dynasty, Western Kshatrapas etc, London: British Museum.
- xxvi. Ray, S.C. 1977. The Stratigraphic Evidence of Coins in Indian Excavations and Some Allied Issues. Varanasi: Numismatic Society of India.
- xxvii. Sahni, Birbal 1973. The Technique of Casting Coins in Ancient India, Varanasi: Bharatiya Publishing House.
- xxviii. Sarma, I.K. 1980. Coinage of the Satavahana Empire, Delhi: Agam Kala Prakashan.
- xxix. Shastri, A.M. (Ed.) 1972. Coinage of Satavahanas and Coins from Excavations, Nagpur: Nagpur University.
- xxx. Shastri, A.M. (Ed.) 1999. Age of the Satavahanas (two volumes): New Delhi: Aryan Prakashan. Srivastava, A.K. 1969. Catalogue of Indo-Greek Coins in the State Museum, Lucknow. Lucknow: State Museum.

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- xxxii. Studies in South Indian Coins: A Journal Published by South Indian Numismatic Society, Madras.
- xxxiii. Whitehead, R.B. 1910. Catalogue of Coins in the Punjab Museum, Lahore. Vol.1: Indo-Greek Coins. Oxford: Clarendon Press.

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**MASTER OF ARTS (M.A.) IN
ARCHAEOLOGY**

SEMESTER 3

Paper VIII : Bio-anthropology

Objective: This course aims at introducing the bioanthropological background of Human evolution. This provides the appropriate biological background of prehistoric cultural evolution. Fundamental methods and models of bio-anthropology will be introduced during the course.

OutCome: It empowers students choosing Prehistory related studies.

Syllabus

UNIT I: (6 Hours)

- i. Introduction to Biological Anthropology

- Methods and Paradigms. Subjects of Study (Human Variation, Population Adaptation, Origins, Role of Molecular Biology. Behavior):
- ii. Language of Biological Anthropology (Taxonomy and Systematics. Species. Subspecies. Phylogenetic Systematics/Cladistics. Ecology and Evolution)
 - iii. Development of evolutionary ideas and different theories of Evolution. Contributions of Linnaeus. Buffon. E. Darwin. Lamark. De Vries and C. Darwin
 - iv. Primates: Origins and Evolution
 - v. Definition and Classification
 - vi. Living Primates
 - vii. Fossil Primates (Paleocene to Miocene)
 - viii. Adaptive Radiation of Primates preceding the emergence of hominids
 - ix. Plio-Pleistocene hominids
 - x. Australopithecines
 - xi. Paranthropines

UNIT II : (8 Hours)

- i. Early Homo
- ii. Homo habilis
- iii. phylogeny of Australopithecines and early Homo
- iv. Later Homo of the Early to mid-Quaternary
- v. Homo erectus
- vi. Early "archaic" Homo sapiens
- vii. Early hominid behavior
- viii. Late Quaternary Humans
- ix. Classic Neanderthals and their Origin
- x. The contemporaries of the classic Neanderthals
- xi. Neanderthal Behaviour: Cultural variability, economy, technology. and society)
- xii. Fate of the Neanderthals

UNIT III : (8 Hours)

- i. Anatomically Modern Humans
- ii. Origins of Modern Humans: fossil and archaeological evidence
- iii. Late Pleistocene cultural variability. economy. technology. society. and population spread
- iv. Molecular Evidence
- v. Mitochondrial. Nuclear. and other DNA and Human Evolution
- vi. "Out of Africa" or "Eve" hypothesis versus multi-regional model
- vii. Human Biology and Variation
- viii. Nature of human genetic variation

- ix. The "Race " concept and classification
- x. The fallacy of "Race" and the inadequacy of traditional racial classifications
- xi. Relationship between Biological evolution and Cultural change

Unit IV: (3 Hours)

- i. Skeletal evidence from Indian Sub-continent from the Mesolithic to Early Historic period
Adoption to local environment
- ii. The Skeletal changes from hunting-gathering to pastoral-agricultural subsistence
- iii. Palaeopathology and Palaeodemography. Model for interpretation of physiological stress indicators in past population
- iv. Migration verses invasion (Aryan invasion Theory)

Unit V: Practical (7 Hours)

- i. Introduction to the human skeleton. identification of bones. . dentition
- ii. Age and sex determination
- iii. Measurements and morphological observation on human bones
- iv. Identification of dentition
- v. Morphometric analysis of dentition
- vi. Identification : pathologies from skeletal and dental remains
- vii. The excavation methods of human remains: Treatment of human bones in field: methods of cleaning and reconstruction of post excavation stage in the lab.

Suggested Reading -Semester 3(in order with the Units)

Relethford. J.H.1997 The Human Species. An Introduction to Biological Anthropology.
Mayfield Publishing Company.

Boaz. N.1. and A.J: Almquist 1997 Biological Anthropology: A Synthetic Approach to Human
Evolution, Prentice Hall.

Klien. R. C. 1989 The Human Career. The University of Chicago Press.
Jones. S. R. Martin and D. Pilbeam 192 The Cambridge Encyclopedia of Human Evolution.
edited book, Cambridge University Press.
Nitecki. MH. and D.V. Nitecki 1994 Origins of Anatomically Modern Humans. edited book.
Plenum Press.
Lewontin. R. 1995 Human Diversity. Scientific American Library.
Montagu. A. 1997 Man's Most Dangerous Myth: The Fallacy of Race. AltaMira Press.

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SEMESTER 3

Paper IX: Ancient Indian Iconography

Course Objectives:

The course introduces the students to the iconography of different religious traditions in India. The students will study the development of iconographic depictions in each of these traditions.

Course Outcome:

On completion of the course the student will be able to identify icons of different periods, classify them and know their related symbolism.

Unit 1: Introduction to Iconography (5 Hours)

- i. Antiquity of image worship in India
- ii. Sources and significance of iconographic studies
- iii. Brief review of Ancient Indian Shilpa Texts and their role in development of iconography
- iv. Concept and symbolism of icon and image worship
- v. Iconometry

Unit 2: Hindu Iconography (9 Hours)

- i. Vishnu Iconography: Sadharan murtis and Avataras
- ii. Iconography of Shiva: Anugraha murtis, Samhara murtis, Vishesha murtis, Regional traits of Shaiva iconography
- iii. Brahma, Ganesha, Surya, Kartikeya
- iv. Iconography of Goddesses: Saptamatrikas, Durga, Lakshmi, Saraswati, Mahishasuramardini, Chamunda, Bhairavi, Regional traits of Shakta iconography
- v. Other Important divinities: Ashtadikpalas, Navagrahas

Unit 3: Buddhist Iconography (9 Hours)

- i. Origin and development of Buddhist imagery
- ii. Aniconic representation of the Buddha: Concept and meaning
- iii. Origin of the Buddha image, various theories of the origin of Buddha image, Different iconographic forms
- iv. Manushi and Dhyani Buddhas
- v. Bodhisattvas: Concept and symbolism, emergence and development of Bodhisattva images, Avalokiteshvara, Vajrapani, Maitreya, Manjushri
- vi. Female Buddhist deities: Origin and development, Tara, Pragnyaparamita, Chunda, Bhrukuti, Marichi, Vasudhara, Mahamayuri, Hariti
- vii. Important Buddhist Deities: Trilokyavijaya, Aparajita, Shambhara, Jambhala

Unit 4: Jaina Iconography (4 Hours)

- i. Origin and development of Jain images
- ii. Ayagapatta
- iii. Jaina Tirthankaras: Forms of Tirthankara images (24 tirthankaras)
- iv. Jaina Yakshas and Yakshinis: Ambika, Chakreshvari, Padmavati, Saraswati, Kubera

Unit 5: Miscellaneous iconographic forms (5 hours)

- i. Role and significance of minor deities in ancient religious setting
- ii. Yakshas, Nagas and Kinnaras
- iii. Vidyadharas, Gandharvas, Kinnaras
- iv. Surasundaris and Mithun Shilpas
- v. Salient features of Syncretic and Composite Icons
- vi. Mudra and Asana

Unit 6: Practical

Study of sculptures through site visits and photographs and project work on a standing monument (this will run concurrent to the preceding units)

Recommended Readings:

- i. Agrawala, P.K. 1994. Studies in Indian Iconography. Jaipur: Publication Scheme.
- ii. Agrawala, Urmila. 1995. North Indian Temple Sculpture. New Delhi: Munshiram Manoharlal. Bakkar, Hans. 1997. The Vakatakas an Essay in Hindu Iconology (Gonda Indological Series). Groningen: Egbert Forsten.
- iii. 1989. Buddhist Iconography. New Delhi: Tibet House.
- iv. Banerjee, J.N.1974. Development of Hindu Iconography. New Delhi: Munshiram Manoharlal.
- Bhattacharya, A.K.2010. Historical Development of Jaina Iconography (A comprehensive study), Delhi: Bharatiya Kala Prakashan.
- v. Bhattacharya. B. 1958. Indian Buddhist Iconography. Calcutta: K.L.Mukhopadhyaya.
- Bhattacharya. D. 1980. Iconology of Composite Images. New Delhi: Munshiram Manoharlal Publications.
- vi. Bruhn, Klaus 1963. Jina Images of Deogarh vol.I. Leiden: Brill.
- vii. Champaklakshmi, R.1981. Vaishnava Iconography in the Tamil Country. Delhi: Orient Longman.
- viii. Chawla, J. 1990. The Rigvedic Deities and their Iconic Forms. New Delhi: Munshiram Manoharlal.
- ix. Czuma, Stanislaw.J. 1985. Kushana sculpture: Images from early India. Ohio: The Cleveland Museum.
- x. Dandwate P. P. 1995. "A Cultural Study of Brahmanical Syncretistic Icons" Pune: Ph.D. Thesis Submitted to University of Pune.
- xi. Deglurkar, G.B. 2004. Portrayal of the Women in the Art and Literature of the Ancient Deccan. Jaipur: Publications Scheme.
- xii. Deglurkar, G.B. 2007. Vishnumurti Namastubhyam. Sri Dwarkadhish Charities, Karnala, Raigad.
- xiii. Daheja, Vidya 1986. Yogini Cult and Temples. New Delhi: National Museum.
- xiv. Desai, Devangana 1996. The Religious Imagery of Khajuraho. Mumbai: Project for the Indian Cultural Studies Publication.
- xv. Desai, Kalpana 1973. Iconography of Vishnu. New Delhi: Abhinav Publications.
- xvi. Gopinath Rao. T.A. 1985. (2nd ed.) Elements of Hindu Iconography. Varanasi: Motilal Banarasidas.
- xvii. Gupte, R.S. 1971. Iconography of Hindus, Buddhists and Jainas. Bombay: D.B. Taraporewala Sons and Co.

- xviii. Huntington, Susan 1984. *The Pala-Sena School of Sculpture*. Leiden: E. J. Brill.
- Joshi N.P. 1966. *Mathura Sculptures*. Mathura: Archaeological Museum.
- xix. Joshi, N.P. 1979. *Bhartiya Murtishastra*. Nagpur: Maharashtra Grantha Nirmiti Mandal.
- xx. Kamalakar. G.(ed.). 1993. *Vishnu in Art. Thought and Literature*. Hyderabad: Birla Archaeological and Cultural Research.
- xxi. Kim, Inchang. 1997. *The Future Buddha Maitreya: An Iconological Study*. New Delhi: D. K. Print World.
- xxii. Khandalwala, Karl (ed.) 1991. *Golden Age: Gupta Art Empire. Province and Influence*. Bombay: Marg Publications.
- xxiii. Krishnan, Y. 1996. *The Buddha image: Its origin and Development*. New Delhi: Munshiram Manoharlal Pvt. Ltd.
- xxiv. Lal. Shyam Kishor 1980. *Female Divinities in Hindu Mythology and Ritual*. Pune: University of Poona
- xxv. Liebert, Gosta 1985, *Iconographic Dictionary of the Indian Religions: Hinduism, Buddhism and Jainism*. Delhi: Sri Satguru Publications.
- xxvi. Lokesh, Chandra 1987. *Buddhist Iconography 2 vols*. New Delhi: Aditya Prakashan.
- xxvii. Mani, V.R.1995. *Saptamatrikas in Indian Religion and Art*. New Delhi: Mittal Publications.
- xxviii. Mishra, Rajani 1989. *Brahma-Worship, Tradition and Iconography*. Delhi: Kanishka Publication House.
- xxix. Mishra, Ramnath 1981. *Yaksha Cult and Iconography*. New Delhi: Munshiram Manoharlal.
- xxx. Mukhopadhyay, Santi Priya 1985. *Amitabha and his Family*. Delhi: Agam Kala Prakashan. Nagar. Shanti Lal 1988. *Mahishasurmardini in Indian Art*. New Delhi: Aditya Prakashan.
- xxxi. Panikkar, Shivaji. K. 1997. *Saptamatraka Worship and Sculptures, An Iconological*
- xxxii. *Interpretations of Conflicts*. New Delhi: D.K. Printworld.
- xxxiii. Parimoo, Ratan 1982. *Life of Buddha in Indian Sculpture (Ashta-Maha-Pratiharyan): An Iconological Analysis*. New Delhi: Kanak Publications.
- xxxiv. Pushpendra Kumar 1993. *Tara: The Supreme Goddess*. Delhi Bharatiya Vidya Prakashan.
- xxxv. Ramachandra Rao 1988-91. *Pratima Kosa- Encyclopedia of Indian Iconography 6 vols*. Bangalore: Kalpataru Research Academy.
- xxxvi. Reechard, J.Cohen 2003. *Essays on Jaina Art*. New Delhi: Manohar Publications.
- xxxvii. Sahai, Bhagwant 1975. *Iconography of Minor Hindu and Buddhist Deities*. New Delhi
- xxxviii. Sahai. Bhagwant 2006. *Recent Research in Indian Art and Iconography*. Missouri:

Kaveri Prakashan.

xxxix. Sarma, I.K. 1982. The Development of Early Shaiva Art and Architecture. (With Special Reference to Andhradesha). Delhi: Abhinava Publications.

xl. Sinha, Kanchan 1979. Karttikeya in Indian Art and Literature. Delhi: Sundeep Prakashan.

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xliii. Sivaramamurti, C. 1961. Indian Sculpture. New Delhi: Allied Publishers Pvt. Ltd.

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xlv. Soundara Rajan, K. V. 1982. India's Religious Art. New Delhi: Cosmo Publication.

xlvi. Sthapati V. Ganapati and Sthapati 2006. Indian Sculpture and Iconography. Ahmadabad: Mapin Publishing.

xlvii. Upadhyaya, Vasudev 1970. Prachin Bharatava Murti Vijnana (Hindi). Varanasi: Chowkhamba Sanskrit Series.

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xlix. Yadava. Nirmala 1997. Ganesha in Indian Art and literature. Jaipur: Publications Scheme. I. Zimmer. Heinrich 2010. Myths and Symbols in Indian Art and Civilization. New Delhi: Motilal Banarassidas.

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Paper IX: Early Iron Age of India

Course Objective:

The course deals with the Early Iron Age period which is a very important phase and the formative period in Indian Civilization. It is very important to understand this phase of this civilization to understand the future technological revolutions in society.

Course Outcomes:

On completion of the course students would have got the knowledge of the causes for technological revolution due to the usage of iron and its consequences in society.

Unit 1: Introduction (6 hrs)

- i . Nature of Iron ore and major Iron ore locations/deposits in India.
- ii. Antiquity of Use of iron
- iii. Beginning of Iron Age in India: Archaeological and Literary evidence
- iv. Overview of Early Iron Age Research in India.

Unit 2: Early Iron Age Culture of India (6 hrs)

- i. Emergence and development of iron craft with special reference to Malhar

- ii. Introduction of Iron and emergence of Complex Societies
- iii. Iron in Gandhar Grave Culture of Swat Valley

Unit 3: Introduction to Early Iron Age and Megalithic Traditions: (10 hrs)

- i . Megalithic culture in India: Evidences and Nature of Distribution
- ii. Settlement pattern of Early Iron age and Megalithic people
- iii. Megalithic traditions/culture in Northern India
- iv. Megalithic traditions/culture in Central India
- v. Megalithic traditions/ culture South India

Unit 4: Excavated Sites of Importance : (10 hrs)

Atranjikhhera, Ahichhatra, Megalithic Cultures of the Adwa Valley (Central Vindhya), Mahurzhari, Naikund, Bhagimohiri, Takalghat-Khapa, Ramapuram, Hirebenekal, Brahmagiri, Chandravali, Adichennalur, Kodumanal

Recommended Readings:

- i. Agrawal. D.P. and DK.. Chakrabarty (ed.) 1979. Essays in Indian Protohistory. New Delhi:D.K Publishers.
- ii. Antonini . Silva and G. ; Stacul 1972 . Protohistoric Graveyards of Swat (Pakistan). Rome: ISMFO Banerjee. N.R. 1965. The Iron Age in India. Delhi: Munshiram Manoharlal.
- iii. Brubaker. Robert. 2002. Aspects of Mortuary variability in the South Indian Iron Age.
- iv. Buletin of the Archaeological Research Institute 60 61: 253 30x2f.ord University Press
- v. Chakrabarti. D.K. 1992 Early Use of Iron in India. Bombay Oxford University Press.
- vi. Chakrabarti D.K.1984 The Study of Iron Age India. Puratattva 13:81: 85.
- vii. Deo S.B. 1973. Problem of South Indian Megaliths . Dharwad: Karnataka University.
- viii. Doe S.B. 1985. The Megaliths: Their Culture. Ecology. Economy and Technology. In Recent Advances Indian Archaeology. S.B. Deo and K. Paddavya (eds.). Pune: Deccan College.
- ix. Ghosh. A. 1973. The City in Early Historical India. Simla. Indian Institute of Advanced Study
- x. Leshnik. Lawrence 1971. South Indian Megalithic Burial. Wiesbaden: Franz Steiner Verlag Gmh.
- xi. Mohanty.R.K. and S.R. Walimbe. 1993. A Demographic Approach to the Vidarbha Megalithic Cultures, Man and Environment. XVI (2):93-103.

- xii. Mohanty.R.K. and .V Selvakumar. 2002. The Archaeology of Megaliths in India: 1947-1997. in Indian Archaeology in Retrospect. (S.Settar and R.Korisettar Eds.). New Delhi:Manohar Publishers. Vol.1:313-52&479-81
- xiii. Moorti. U.S. 1994. Megalithic Culture of South India: Socio Economic Perspectives. Varanasi: Ganga Kaveri Publishing House.
- xiv. Narsimhaiah. B. 1980. Neolithic and Megalithic Cultures in Tamilnadu. Delhi: Sandeep Prakasan. Rao. K. P. 1988. Deccan Megaliths. Delhi: Sandeep Prakashan.
- xv. Renfrew. Colin. 1989. Archaeology and Language: Puzzle of IndoEuropean Origins. London: Penguin Books.
- xvi. Roy. T.N. 1983. The Ganges Civilization: A Critical Study of the PGW and NBPW Periods of Ganga Plains of India. New Delhi: Ramanand Vidya Bhavan.
- xvii. Sinha. B.P. 1968. Potteries in Ancient India. Patna: University Press.
- xviii. Tripathi. Vibha. 1976. The Painted Grey Ware: an Iron Age Culture of Northern India. Delhi: Concept Publishing House.
- xix. Tripathi. Vibha. 2008. History of Iron Technology in India (from Beginning to Pre-Modern Times). New Delhi: Rupa and Infinity Foundation

Semester IV

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MASTER OF ARTS (M.A.)

IN ARCHAEOLOGY

SEMESTER 4

Paper X: Art and Architecture of India (600 C.E. TO 1800 C.E.) - II

Course Objectives:

This course introduces the student to the major developments in art and architecture in India during the early Medieval and Medieval Period. They deal with both rock cut and structural architectures. Along with architectural structures they will be introduced to the bronzes in the South and east of India.

Course Outcomes:

On completion of the course students not only become familiar with the monuments and sculptures of India but also will be able to know the subtle transition in stylistic variation from dynasty to dynasty during the Medieval period.

Unit 1: Early Structural Temples in North, Central, and Western India (4 hours)

- i. Review of Post-Gupta Monuments and Sculptures in Northern India
- ii. Pratiharas: Deogarh, Gwalior, Gyaraspur
- iii. Osian group of temples in Rajasthan
- iv. Kalachuris: Candrehe. Bheraghat, Maihar
- v. Maitrakas and Saindhavas: Gop. Khimeshvara. Ghumali. Miyani

Unit 2: Late Structural Temples in North, Central, and Western India (4 Hours)

- i. Paramaras: Udaypur, Jamali, Nemawar
- ii. Solanki: Sunak, Modhera, Sejakpur, Dilwarae. Chandellas: Khajuraho group of temples

Unit 3: Structural Temples and monuments: Eastern India (4 Hours)

- i. Development and Characteristics of Kalinga style of Temple Art and Architecture
- ii. Parashurameshvara, Mukteshvara, lingaraj and Konark Sun temple

Unit 4: Rock-cut Monuments, Structural Temples and Sculptures: Deccan (4 Hours)

- i. Chalukyas of Badami: Aihole, Badami, Pattadakal, Mahakuta
- ii. Rock-cut caves at Elephanta
- iii. Rashtrakutas: Alampur Group of Temples, Ellora Rock-cut caves and Monolithic temples
- iv. Chalukyas of Kalyana: Gadag, Ittagi, Harihar and Laksmeshvara.
- v. Yadavas: Sinnar, Balasane and Jhodge
- vi. Shilaharas: Ambarnath and Khidrapur
- vii. Study of temple Architecture - Practical Training of Plan drawing

Unit 5: Rock-cut Monuments, Structural Temples and Sculptures: South India (7 Hours)

- i. Pallavas: Mahabalipuram and Kanchipuram
- ii. Pandyas: Kalugumalai and Tirupatur
- iii. Cholas: Kumbhakonam, Tanjavur, Gangaikonda Cholapuram and Darasuram.
- Iv. Hoyasalas: Belur, Halebidu and Somanathpur

Unit 6: Introduction to Indo- Islamic Architecture (5 Hours)

- i. Indo-Islamic architecture: Delhi Sultanate, Mughal period, provincial styles with special reference to Deccani states and medieval water architecture.

ii. Layout of gardens in India through the ages (Dholpur, Humayun's Tomb, Akbar's Tomb, Shalimar, Taj Mahal, Nishat)

Unit 7 : Bronzes of India (4 Hours)

- i. Pallava and Chola Bronzes of South India
- ii. Palas of the Senas of Eastern India

Unit - 8 : Practical training in identifying structural details of Medieval Indian and Indo Islamic architectures and sculptures through site visits and photographs (this will run concurrent of the preceding units)

Recommended Readings:

- i. Acharya. P.K. 1927. Indian Architecture According to Manasara - Shilpashatra. London: Oxford University Press
- ii. Ali. Rahman 2002. Temples of Madhya Pradesh - The Paramara Art. New Delhi: Sundeep Prakashan

- iii. Bandyopadhyay. Bimal. 1981. Metal Sculptures of Eastern India. Delhi: Sundeep Prakashan. Deglurkar. G. B. 1994. Temple Architecture and Sculpture of Maharashtra. Nagpur: Nagpur University.
- iv. Berkson. Carmel 1992. Ellora: Concept and Style. New Delhi: IGNC A and Abhinav Publications.
- v. Brown, Percy 1940. Indian Architecture (Buddhist and Hindu Periods). Bombay: D. B. Taraporewala Sons and Co.
- vi. Chandra, Pramod (ed) 1975. Studies in Indian Temple Architecture. New Delhi: American Institute of Indian Studies.
- vii. Collyer, Kelleston 1990. The Hoyasala Artists Their Identity and Style. Mysore: Directorate of Archaeology and Museums.
- viii. Deglurkar, G. B. 2004. Portrayal of the Women in the Art and Literature of the Ancient Deccan, Jaipur: Publications Scheme.
- ix. Deglurkar, G. B. 2005. Sursundari, Pune: Bhartiya Vidhya Bhavan (in Marathi).
- x. Dehejia. Vidya 1986. Yogini Cult and Temples: A Tantric Tradition, National Museum.
- xi. Dehejia. Vidya 1990. The Art of Imperial Cholas. Columbia: Columbia University Press.
- xii. Dehejia. Vidya 1979. Early Stone Temples of Orissa, Delhi: Vikas Publishing House.
- xiii. DeLippe. Aschwin 1978. Indian Medieval Sculpture. Amsterdam: North Holland Publishing Co. Desai, Vishakh and Darielle Mason (eds) 1993. Gods. Guardians and Lovers. New York and Ahmedabad: Asia Society Galleries and Mapin Publishing.
- xiv. Deva. Krishna 1990. Temples of Khajuraho (2 vols.). New Delhi: Archaeological Survey of India.
- xv. Deva. Krishna 1995. Temples of India (2 vols.) New Delhi: Aryan Books International.
- xvi. Dhaky. M.A. 1961. The Chronology of Solanki Temples of Gujarat, Journal of Madhya Pradesh Itihas Parishad 3:1-83.
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- xvi. Dhaky. M.A. 1977. The Indian Temple Forms in Karnataka Inscriptions and Architecture, Delhi: Abhinav Publications.
- xix. Dhaky. M.A. (ed.) | 996. Encyclopaedia of Indian Temple Architecture. Vol. I, Part3, South India: Upper Dravida desa Later Phase A.D. 973-1326. Delhi: American Institute of Indian Studies and Oxford University Press.
- xx. Dhaky. MA. (ed.) 1998. Encyclopaedia of Indian Temple Architecture. Vol.II. Part 3, North India: Beginnings of Medieval Idiom C.A.D. 900-1000. Delhi: American Institute of Indian Studies and IGNC A.
- xxi. Dhaky. M.A.2005. The Indian Temple Traceries. New Delhi: D.K. Printworld (P) L.td.
- xxii. Dhavalikar. M.K. 1983. Masterpieces of Rashtrakuta Art: The Kailas. Bombay: D.B. Taraporewala and Sons Pvt. Ltd.

- xxiii. Donaldson, Thomas E. 1985. Hindu Temple Art of Orissa. (3 vols.). Leiden: E. J. Brill.
- Fergusson, James 1876. A History of Indian and Eastern Architecture. London: John Murray.
- Foekema, G. 1994. Hoyasala Architecture. New Delhi: Books and Books.
- xxiv. Foekema, G. 2003. Chalukya Architecture (3 vols.) New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd.
- xxv. Ganguly, O.C. 1957. Art of Chandela, Calcutta: Rupa and Company.
- xxvi. Handa, Devendra 1984. Osian: History, Archaeology, Art and Architecture. Delhi: Sundeep Prakashan
- xxvii. Hardy, Adam 1995. Indian Temple Architecture: Form and Transformation. New Delhi: Abhinav Publications.
- xxviii. Hardy, Adam 2007. The Temple Architecture of India. Chichester: Wiley
- xxix. Harle, James 1986. The Art and Architecture of the Indian Subcontinent. Harmondsworth: Penguin.
- xxx. Huntington, Susana. L. with John Huntington. 1985. The Art and Architecture of India. New York: Weatherhill
- xxxi. Kramrisch, Stella 2002 (Reprint) The Hindu Temples (2 vols.) New Delhi: Motilal Banarsidass.
- xxxii. Lockwood, Michael et al. 2001. Pallava Art. Madras: Tambaram Research Associates.
- xxxiii. Mathur, Asha Rani. 1988. The Great Traditions: Indian Bronze Masterpieces. New Delhi: Festivals of India.
- xxxiv. Meister, Michael W. and M.A. Dhaky (ed.) 1991. Encyclopedia of Indian Temple Architecture. Vol. II. Part 2. North India: Period of Early Maturity CAD 700-900. Delhi: American Institute of Indian Studies and Oxford University Press.
- xxxv. Meister, Michael W. and M.A. Dhaky (ed.) 1999. Encyclopedia of Indian Temple Architecture. Vol. II. Part I, North India: Foundations of North Indian Style C.250 B.C.-A.D 1100. Delhi: American Institute of Indian Studies and Oxford University Press.
- xxxvi. Meister, Michael W. (ed.) 1999. Encyclopaedia of Indian Temple Architecture. Vol. I, Part I. South India: Lower Dravida desa 200 B.C. - A.D 1324. Delhi: American Institute of Indian Studies and Manohar Publishers.
- xxxvii. Meister, Michael W. and M.A. Dhaky (ed.) 1999. Encyclopaedia of Indian Temple Architecture. Vol. I. Part 2. South India: Upper Dravidadesa A.D 550 - 1075. Delhi: American Institute of Indian Studies and Oxford University Press.
- xxxviii. Michell, George. 1977. The Hindu Temple: An Introduction to its Meaning and Form. Chicago: University of Chicago Press.
- xxxix. Michell, George. (ed.) 1996. Encyclopaedia of Indian Temple Architecture. Vol. I, Part 3, South India: Upper Dravidadesa Later Phase. Delhi: American Institute of Indian Studies.
- xl. Misra, R. N. 1987. Sculptures of Dahala and Dakshina Kosala and Their Background, Delhi: Agam Kala Prakashan.

- xli. Nanavati. J. M. and M. A. Dhaky. 1969. The Maitraka and the Saindhava Temples of Gujarat. Ascona: Artibus Asiae.
- xlii. Nanavati. J. M and M. A. Dhaky. 1963. The Ceilings in the temples of Gujarat. Bulletin of the Baroda Museum and Picture Gallery. Vols .XVI - XVII.
- xliii. Parimoo. Ratan et al 1988. Ellora Caves: Sculptures and Architecture. New Delhi: Books and Books.
- xliv. Pichard. Pierre 1995. Thanjavur Brhadisvara. An Architectural Study. Delhi: IGNCA and Ecole Francais ed el Extreme Orient.
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- xlvii. Sivaramamurti. C. 1961. Indian Sculpture. New Delhi: Allied Publishers Pvt. Lid.
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- xlix. Soundara Rajan. K. V. 1972. Indian Temple Styles: The Personality of Hindu Architecture. New Delhi: Munshiram Manoharlal
- l. Soundara Rajan. K. V. 1980. Art of South India-Deccan. New Delhi: Sundeep Prakashan.
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- lii. Soundara Rajan. K. V. 1981. Cave Temples of the Deccan. New Delhi: Archaeological Survey of India.
- liii. Srinivasan.K . R. 1972. Temples of South India. New Delhi: National Book Trust.
- liv. Srinivasan.K . R. 1964. Cave Temples of the Pallavas. New Delhi: Archaeological Survey of India.
- lv. Tadgell. Christopher 1995. The History of Architecture in India. London: London Press Ltd.
- lvi. Tartakov. Gary Michael. 1997. The Durga temple at Aihole: Historiographical Study. New Delhi: Oxford University Press.
- lvii. Trivedy. R. D. 1990. The Temples ofPratihara Period in Central India. New Delhi: Archaeological Survey of India.

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SEMESTER 4

Paper X: ETHNOARCHAEOLOGY

Objectives:

In this Course the students will learn how Ethnoarchaeology involves the investigations of contemporary behavior and material culture from an archeological perspective. This study is a broad field of inquiry that encompasses all aspects of human adaptation from selection of raw material to ideological basis for the use of specific symbols. During the course students will review various ethnoarchaeological studies carried out in India.

Course Outcome:

After completion of the course students are familiarised with the importance of ethnographic data and its importance to reconstruct the past.

Unit I: Concepts in Ethnoarchaeology (7 hours)

- i. Definition, nature, scope and methods of ethnoarchaeology
- ii. Review of the Ethnoarchaeological researches in India.
- iii. Ethnoarchaeology and reconstruction of past material culture: e.g. Settlement pattern, technology, ceramics, food processing, etc.

Unit 2: Tribe and Caste (5 hours)

- i. The composition of Indian society
- ii. Origin and evolution of the caste system in India and its archaeological significance.

Unit 3: Ethnoarchaeological Studies In Indian Settings (12 hours)

- i. Forager/collector model to Palaeolithic and Mesolithic societies: e.g. Andaman Islanders
- ii. Ethnoarchaeological research on the living hunter-gatherers in central, western and Southern regions of India. Pardhis, Van Vagris, Korkus, Gonds, Bastar, Birhors, Yanadis, Chenchus, and Musahars. Veddas Of Sri Lanka
- iii. Shifting cultivation in modern days and its practices and their relevance to the study of Mesolithic, Neolithic and Chalcolithic cultures of India.
- iv. Ethnoarchaeology of the South Indian Neolithic culture
- v. Ethnoarchaeological research for reconstructing the early agro-pastoral Chalcolithic communities of central and western India; Mahadeo Kolis, Bhils and Dhangars.
- vi. Living Megalithic tradition in India.
- vii. Ethnoarchaeology of fishing (inland and coastal) economies

Unit 4: Ethnoarchaeological Studies Outside India: (8 Hours)

- i. Eskimos of Alaska. Bushmen of the Kalahari Desert and Australian Aborigines

Unit 5: Practicals

- i. Field visit to Tribal areas

Recommended Readings:

- i. Ajay Pratap 1987. Shifting Cultivation in the Rajmahal Hills of India, in *Archaeology as Long-term History*. (Ed) Ian Hodder, pp. 68-83. Cambridge: Cambridge University Press.
- ii. Ajay Pratap 2000. *The Hoe and the Axe: Ethnohistory of Shifting Cultivation in Eastern India*. New Delhi: Oxford University Press.
- iii. Allchin, B. 1985. Ethnoarchaeology in South Asia, in *South Asian Archaeology 1983*. (J. Schotsmans and M. Taddei Eds.), pp 21-33 Naples: Instituto Universitario Orientale.
- iv. Allchin, B. 1994. *Living Traditions: South Asian Ethnoarchaeology*. New Delhi: Oxford & IBH Co Pvt Ltd.
- v. Allchin, F. R. 1959. Poor Men's Thalis : A Deccan Potter's Technique, *Bulletin of the School of Oriental and African Studies*. 22(2): 250-7.
- vi. Ansari, S. 2000. Small game hunting Musahars: An Ethnoarchaeological Approach. *Puratattva*. 30: 141-150
- vii. Ansari, S. 2001. Fishing Practices Among the Mallahs of Allahabad District. Uttar Pradesh. *Man and Environment*. 26 (1): 39-55.

- viii. Ansari. S. 2005. Ethnoarchaeology of Prehistoric Settlement Pattern of South-Central Ganga Valley, Indian Society for Prehistoric and Quaternary Studies Monograph Series No. 4. Pune: Indian Society for Prehistoric and Quaternary Studies.
- ix. Ansari. S. 2005. Prehistoric Settlement Pattern of South-Central Ganga Valley: An Ethnoarchaeological Perspective in Gurudakshina: Facets of Indian Archaeology. (Ed.) Alok Kumar Kanungo. p. 287-328. Oxford: BAR International Series 1433.
- x. Ansari. S. 2011. Ethnoarchaeological Perspectives of Prehistoric settlement Patterns of South-Central Ganga Valley Oxford: BAR International Series.
- xi. Arati Deshpande-Mukherjee 2000. An Ethnographic Account of Contemporary Shellfish Gathering on the Konkan Coast. Maharashtra. Man and environment 25 (2): 79-92.
- xii. Arati Deshpande-Mukherjee 2006. Reconstructing the Past: Ethnographic Observation on Shell working at Bishnupur, in Past and Present Ethnoarchaeology in India. (Gautam Sengupta, Suchira Roychoudhury and Sujit Som Eds.). pp. 383-409. Pragati Publications (New Delhi) in collaboration with Centre for Archaeological Studies and Training Eastern India (Kolkata).
- xiii. Axel Steensberg. 1980. New Guinea Gardens: Study of Husbandry with Parallel in Prehistoric Europe. Cambridge University Press. Cambridge.
- xiv. Axel Steensberg. 1986. Man the Manipulator. An Ethnoarchaeological Basis for Reconstructing the Past. National Museum. Copenhagen
- xv. Axel Steensberg. 1993. Fire Clearance Husbandry: Traditional Techniques throughout the World. Poul Kristensen. Hernig.
- xvi. Bettinger. R.I. 1987. Archaeological Approaches to Hunter-Gatherer. Annual Review of Anthropology 16: 121-142.
- xvii. Bhan Kuldeep K. 2007 Review of Ethnoarchaeological Research in Western India and Future Directions, in Anthropology for Archaeology Proceedings of the Prof. Irawati Karve Birth Centenary Seminar (Walimbe, S.R. P.P. Joglekar and K.K. Basa Eds.). p. 63-76. Pune: Deccan College.
- xviii. Bichieri. M.G. 1972. Hunters and Gatherers Today. New York: Holt, Rinehart and Winston. Binford. L. R. 1988. In Pursuit of the Past. New York: Thames and Hudson.
- xix. Binford. L.R. 1978. Nunamiut Ethnoarchaeology. New York: Academic Press. Coles. J. 1973. Archaeology by Experiment. London: Hutchinson.
- xx. Cooper. Z. 1992. The Relevance of the Forger/Collector Model to Island Communities in the Bay of Bengal. Man and Environment 17(2): 111-122.
- xxi. Cooper. Z. 1997. Prehistory of the Chitrakot falls in Central India. Pune: Ravish Publishers. Cooper. Z. 2002. Archaeology and History: Early Settlement in the Andaman Islands. New Delhi: Oxford University Press.
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- xxiii. Dhavalikar. M.K. 1994. Chalcolithic Architecture at Inamgaon and Walki: An Ethnoarchaeological Study. in *Living Traditions* (Ed.) B. Allchin. pp 35-52. New Delhi: Oxford-IBH.
- xxiv. David N. And C. Kramer 2001. *Ethnoarchaeology in Action*. Cambridge: Cambridge University Press.
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- xxviii. Grigg. DB.B. 1980. *The Agricultural Systems of the World*. Cambridge: Cambridge University Press.
- xxix. Jain. S.K. 1991. *Contributions of Indian Ethnobotany*. Jodhpur: Scientific Publishers.
- Jayaswal. V and K. Krishna 1986. *An Ethnoarchaeological View of India Terracotta*. New Delhi: Agam Kala.
- xxx. Jochim. M. A. 1976. *Hunter Gatherer Subsistence and Settlement: A Predictive Model*. New York: Academic Press
- xxxi. Kanungo. A.K. 2004. Glass Beads in Ancient India and furnace- Wound Beads at Purdalpur: An Ethnoarchaeological Approach. *Asian Perspective*. Vol 43(1): 123 -150.
- xxxii. Kanungo. A. K. 2004. *Glass Beads in Indian Archaeology: An Ethnoarchaeological Approach* Oxford: BAR International Series 1242.
- xxxiii. Kenoyer. JM Archacolorical 1983. *Shell working Industries of the Indus Civilization: An Archaeological and Ethnographic Perspective*. Ph.D Dissertation. Berkeley: University of California
- xxxiv. Kenoyer, J.M. M. Vidale and K.K. Bhan 1991. Contemporary stone bead - Making in Khambhat. India: Patterns of Craft Specialization in the Archaeological Record. *World Archaeology* 23 (1): 44-63.
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- xxxvi. Kramer. C. 1980. *Ethnoarchaeology*. Guildford Survey: Columbia Survey: Columbia University Press.
- xxxvii. Kramer. C. 1994. A Tale of Two Cities: Ceramic Ethnoarchaeology in Rajasthan in *Living Traditions* (B. Allchin Ed.). pp 307-22. New Delhi: Oxford-IBH.
- xxxviii. Lec. R.B. and I. Devore 1975. *Man the Hunter*. Chicago: Aldine Publishing Co.
- xxxix. Leshnik. L.S. And G. Sontheimer. 1975. *Pastoralists and Nomads*. Wiesbaden: Otto Harrassowilz.
- xl. Maheshwari. J.K. 1996. *Ethnobotany in South Asia*. Jodhpur: Scientilie Publishers.

- xli. Maheshwari. J.K. and R. Jones 1988. *Archaeology with Ethnography: An Australian Perspective*. Canberra: Department of Prehistory: Research School of Pacific Studies. Australian National University.
- xlii. Meehan. B. And R. Jones 1988. *Archaeology with Ethnography: An Australian Perspective*. Canberra: Department of Prehistory. Research School of Pacific Studies. Australian National University.
- xliii. Michael, J. Balick and Paul Alan Cox 1996. *Plant. People and the Science of Ethnobotany*. Museum of Anthropology. University of Michigan. Ann Arbor.
- xliv. Miler. D. 1985 *Artefacts as Categories: A Study of Ceramic Variability in Central India*. Cambridge: Cambridge University Press.
- xlvi. Misra. V.N. 1974. *Archaeological and Ethnographic Evidence for the Hafting and Use of Microliths and Related Tools*. *Puratattva* 7: 3-12.
- xlvii. Misra. V.N. 1984. *The Van Vagris- Lost Hunters of Thar Desert*. Rajasthan. *Man and Environment* 15 (2) 89-108.
- xlviii. Mohanty. P. and J. Mishra 2002. *Fifty Years of Ethnoarchaeological research in India: A Review in Archaeology and Interactive disciplines* (S. Settar and R. Koriseltar Eds.). pp 169-207. Delhi: Indian Council of Historical Research
- xlix. Morrison Kathleen D. and Laura L. Junker. 2002. *Forager-Traders in South and Southeast Asia: Long Term Histories*. Cambridge: Cambridge University Press.
- l. Murty. M.L.K. 1981. *Hunter-Gatherer Ecosystems and Archaeological Patterns of Subsistence Behaviour on the South-East Coast of India: An Ethnographic Model*. *World Archaeology* 13: 47-58.
- li. Murty. M.I.K. 1985. *Ethnoarchaeology of Kurnool Cave Area*. *World Archaeology* 71 (2): 192-205.
- lii. Murthy M.I.K. 2007. *Social Ecology of Village Coddlesses and Agro-pastoral Communities in Eastern Ghats (Andhra Pradesh)*. in *Anthropology for Archaeology Proceedings of the Prof. Irawati Karve Birth Centenars Seminar* (Walimbe. S.R. P.P. Joglekar and K.K. Basa Eds.), pp. 95-103. Pune: Deccan College.
- liii. Murty. M.I.K. and G.D. Sontheimer 1980. *Prehistoric Background to Pastoralism in the Southern Deccan in the Light of Oral Traditions and Cults of Some Pastoral Communities*. *Anthropos* 75: 163-84.
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- Ivii. Paddayya. K. 1998. Evidence of Neolithic Cattle Penning at Budihal. Gulbarga District. Karnataka. *South Asian Studies* 13: 141-54.
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- Ixi. Raju. D.R. 1988. *Stone Age Hunter-Gatherers: Ethno- Archacology of Cuddapah Region*. South-East India. Pune: Ravish Publishers.
- Ixii. Ray. H.P. 1996. Maritime Archaeology: The Ethnographic Evidence. *Man and Environment* 12 (1): 74-85.
- Ixiii. Richard B. Lee and Richard Daly 1999. *Hunters and Gatherers*. Cambridge: Cambridge University Press.
- Ixiv. Rivers. W. H. R. 1967. *The Todas*. London.
- Ixv. Roy. S.K. 1981. Aspects of Neolithic Agriculture and Shifting Cultivation. Garo Hills. Meghalaya. *Asian Perspective* 24: 193-221.
- Ixvi. Satapathy. KK. . and B.K. Sarma 2002. Shifting Cultivation in India: An Overview. *Asian Agri-History*. 6 (2): 121-139.
- Ixvii. Schiffer. M. 1978. Methodological Issues in Ethnoarchaeology. in *Exploration in Ethnoarchaeology* (R. Gould Ed.), p 229-47. Albuquerque: University of New Mexico Press.
- Ixviii. Sengupta. C. Suchira Roychoudhury and Sujit Som 2006. *Past and Present Ethnoarchaeology in India*. New Delhi: Pragati Publications and Centre for Archaeological Studies and Training Eastern India (Kolkata).
- Ixix. Sinopali. C.M. 1991. Seeking the Past through the Present: Recent Ethnoarchaeological Research in South Asia. *Asian Perspectives* 28 (2): 145-161.
- Ixx. Smiley. FE.. et al. 1980. *The Archaeological Correlates of the Hunter-Gatherer Societies: Studies from the Ethnographic Record*. Ann Arbor: Michigan University Press
- Ixvi. Stiles. D. 1977. Ethnoarchaeology: A Discussion of Method and Application. *Man* 12: 87-103.
- Ixxii. Impathi. V. and Arun K. Mishra 1997. Understanding Iron Technology: An Ethnographic Model. *Man and Environment* 22 (1): 59-68.

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MASTER OF ARTS (M.A.)

IN ARCHAEOLOGY

SEMESTER 4

Paper XI: Arts and Crafts of Ancient India

Objective:

Arts and Crafts are reflections of a civilization. The objective of this course is to emphasise the importance of arts and craft objects in the archaeological context. It highlights the technology and social context of their production. The course deals with examination of several art and craft objects of metal, stone, bone, horn, Ivory and shell and technologies of their production. It discusses from prehistoric rock-art and development of art through different cultural periods up to the Classical Gupta period.

Outcome:

On completion of the course the student will be able to identify artifacts from different periods and will be able to understand the journey of Indian art from Prehistoric times till the Gupta period.

Unit -1

(5 Hours)

- i. Definition of art and craft
- ii. Development of Humans into tool maker, Early forms of societies

Unit- 2

(6 Hours)

- i. Metal objects: Metals, Processing ores, Manufacture of Artefacts.
- ii. Stone objects: Flaking methods, Manufacture of Artefacts.
- iii. Pottery: Pottery making, baking process the ages
- iv. Art on ceramics through ages

Unit - 3

(4 Hours)

- i. Bead Industry
- ii. Terracotta objects
- iii. Art on seals

Unit - 4

(4 Hours)

- i. Bone and Ivory objects
- ii. Shell Industry

Unit - 5**(5 Hours)**

- i. Prehistoric Art
- ii. Protohistoric Art

Unit - 6**(8 Hours)**

- i. Mauryan Art
- ii. Kushana Art
- iii. Gupta Art

Practical : Identification of beads, bangles, terracotta objects and chronological identification of pottery and other artefacts, their drawing and documentation (this will run concurrent to the preceding units)

Recommended Readings:

- i . Agrawal, D.P. 1971. The Copper Bronze Age in India. Delhi.
- ii. Bharadwaj, H.C. 1979. Aspects of Ancient Indian Technology. Delhi.
- iii . Census Report. 1967. Ivory Works in India through the Ages. Delhi.
- iv. Childe, V.G. 1954. Rotary Motion. In C. Singer, E.J. Holmyard & A.R. Hall (eds.) A History of Technology, pp. 187-215. Oxford.
- v. Clarke, DL.. 1978. Analytical Archaeology. New York.
- vi. Dikshit, M.G. 1949. Etched Carnelian Beads. Poona.
- vii. Dwivedi, V.P. 1976. Indian Ivories. Delhi.
- viii. Hegde, K.T.M. 1991. An Introduction to Ancient Indian Metallurgy. Bangalore.
- ix. Hegde, K.T.M., R.V. Karanth & S.P. Sychanthavong. 1982. On the Composition and Technology of Harappan Microbeads. In G.L. Possehl (ed.) Harappan Civilization. A Contemporary Perspective, pp. 239-44. Delhi.
- x. Hodges, H. 1964. Artefacts. An Introduction to Early Materials and Technology. London.
- xi. Jayaswal, V. & K. Krishna. 1986. An Ethno-archaeological View of Indian Terracottas. Delhi.
- xi. Kenoyer, J.M. 1984a. Shell Working Industries of the Indus Civilization: An Archaeological and Ethnographic Perspective. Ann Arbor.
- xiii. Kenoyer, J.M. 1984b. Shell Industries at Mohenjodaro, Pakistan, in M. Jansen and G. Urban (eds.) Reports on Field Work at Mohenjodaro: Interim Reports, Vol 1, pp. 99-115. Aachen & Rome.
- xiv. Kenoyer, J.M., M. Vidale & KK.. Bhan. 1991. Contemporary Stone Bead Making in Khambhat, India: Patterns of Craft Specialization and Organization of Production as Reflected in the Archaeological Record. World Archaeology 23,:1 44-63.
- xv. Lorblanchet, M. (ed.) 1992. Rock Art in the Old World. Delhi.
- xvi. Mackay, E.J.H. 1937. Bead making in Ancient Sind. Journal of the American Oriental Society. 57 : 1-15.
- xvii. Mitterwallner, G.v. 1989. Yaksas of Ancient Mathura. In D. Srinivasan (ed.) Mathura: The Cultural Heritage, pp. 368-82. Delhi.
- xviii. Neumayer, E. 1993. Lines on Stone. Delhi.
- xix. Pandey, S.K. 1993. Indian Rock Art. Delhi.
- xx. Possehl, G.L. 1981. Cambay Beadmaking. Expedition 23,4: 39-47.

- xxi. Ray, N.R. 1975. Maurya and Post-Mauryan Art. A Study in Social and Formal Contrasts. Delhi.
- xxii. Singer, C, E.J. Holmyard & A.R. Hall (eds.) A History of Technology. 2 volumes. Oxford.
- xxiii. Tripathi, V. & A.K. Srivastava. 1994. The Indus Terracottas. Delhi.
- xxiv. Whallon, R. & J.A. Brown (ed.) 1982. Essays on Archaeological Typology Evanston.
- xxv. Williams, J. 1982. The Art of Gupta India, Empire and Province. Princeton.
- xxvi. Williams, J. 1989. The Case of the Omitted Hundreds: Stylistic Development in Mathura Sculpture of the Kushana Period. In D. Srinivasan (ed.) Mathura: The Cultural Heritage, p. 325-31. Delhi.

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MASTER OF ARTS (M.A.)

IN

ARCHAEOLOGY

SEMESTER 4

Paper XI: Theories in Archaeology and Research Methodology

Course Objectives:

The objective of this course is to introduce theories and its application in archaeology. It provides a methodological foundation for archaeological interpretation. Students will be learning analytical processes developed by different schools of archaeology and the process of techniques of scientific writing and presentation skills.

Course Outcomes:

By the completion of the course students will be able to understand basic features of various theories and thoughts used in archaeological interpretations, formulate a research proposal and decide on appropriate materials and methods of analysis and present the findings and the process of conducting research in written and verbal formats.

Unit 1: Introduction to Trends in Archaeological Theory (5 hours)

- i. Importance of Theories in Archaeology
- ii. Changes in archaeological theory: from culture-historical perspective
- iii. New archaeology
- iv. Middle Range theory, Behavioral archaeology and ethno archaeology
- v. Introduction to contemporary theories.

Unit 2: Epistemology and Philosophy of Science (4 Hours)

- i. Knowledge theories before emergence of science

ii. Rationalism, positivism, empiricism, realism and relativism

Unit 3: Post-Processual Perspectives (8 Hours)

i. Structuralism

ii. Post-structuralism: Deconstructionism

iii. Gender archaeology: Feminism

iv. Marxist archaeology

v. Post-modernism

Unit 4: Fundamentals of Logic (5 Hours)

i Induction and Deduction

ii. Hypothetico-Deductive Method

iii. Inductive-Statistical Method

iv. Analogy

v. Fallacies

Unit 5: Research process (5 Hours)

i. Seven Stages of research process

ii. Types of research designs

iii. Variables and sampling

iv. Virtues of a researcher

v. Writing a Research proposal

Unit 6: Report Writing and Presentation (5 Hours)

i. Types of presentations

ii. Structure of dissertation and thesis

iii. Style of writing: what to do and what not to do

iv. Poster Presentation

v. Public/Oral Presentation

Recommended Reading:

1. Beall. J.C. 2010. Logic: The Basics. Oxford: Roulledge.
- i. Binford. L.R. 1983. Working at Archaeology. New York Academic Press.
- iii. Binford. L.R. 1989. Debating Archaeology: New York Academic Press.
- iv. Chaudhary. C.M. 1991. Research Methodology. Jaipur: RBSA.
- v. Cohen. M.R. and E. Nagel 1976. An Introduction to Logic and Scientific Method. Mumbai: Allied Publishers.
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- vii. Gellner. E. 1985. Relativism and Social Sciences. Cambridge: Cambridge University Press.
- viii. Goode. W.J. and P.K. Hatt 1952. Methods in Social Research. Tokyo McGraw Hill
- xi. Gupta. Anil 2006. Empiricism and Experience. Oxford: Oxford University Press
- x. Hodder. I. 1992. Theory and Practice in Archaeology. London: Routledge.
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- xii. Joglekar. P.P. 2014. Research Methodology for Archacology Students. Pune: Gayatri Sahitya.
- xiii. Jones. Andrew 2004. Archaeological Theory and Scientific Practice. Cambridge: Cambridge Press
- xiv. Kelley. J.H. and M.P. Hanen 1990. Archaeology and the Methodology of Science. Albuquerque: University o f New Mexico Press.
- xv. Mates. Benson 1972. Elementary Logic. New York: Oxford University Press.

- xvi. Marczyk, Geoffrey, David DeMatteo and David Festinger 2005. *Essentials of Research Design and Methodology*. Hoboken, New Jersey: John Wiley & Sons.
- xvii. Munson, R. 1976. *The Way of Life: An Informal Logic*. Boston: Houghton Mifflin.
- xviii. Paddayya, K. 1990. *New Archaeology and Aftermath View from Outside the Anglo American World*. Pune: Ravish Publishers
- xix. Paddayya, K. 2002. A Review of Theoretical Perspectives in Indian Archaeology. in S. Settar and R. Korisetar (Ed.) *Indian Archaeology in Retrospect*. Vol. IV. pp. 117-157. New Delhi: ICHR and Manohar.
- xx. Paddayya, K. 2016. *Revitalizing Indian Archaeology*. Two volumes. Delhi
- xxi. Phelan, J.W. 2005. *Philosophy, Themes and Thinkers*. Cambridge: Cambridge University Press.
- xxii. Preucel, R. (ed). 1991. *Processual and Postprocessual Archaeologies Multiple Ways of Knowing the Past*. Carbondale (Illinois): Southern Illinois University Press.
- xxiii. Rosenau, P.M. 1992. *Postmodernism and the Social Sciences*. Princeton: Princeton University Press.
- xxiv. Salmon, W.C. 1984. *Scientific Explanation and Causal Structures of the World*. Princeton: Princeton University Press.
- xxv. Schiffer, M.B. 1995. *Behavioral Archaeology: First Principles*. Salt Lake City: University of Utah Press.
- xxvi. Shanks, M. and C. Tilley. 1987. *Social Theory as Archaeology*. Cambridge: Polity Press.
- xxvii. Sharma, K.R. 2002. *Research Methodology*. New Delhi: National Publishing House.
- xxviii. Thakur, D. 2003. *Research Methodology in Social Sciences*. New Delhi: Deep and Deep.

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SEMESTER 4

Paper 12: Dissertation (Compulsory)

Dissertation

Dissertation work on a topic selected and researched by individual students with the help of a supervising teacher.

(Each student shall select a topic for dissertation in the 3rd Semester, write a proposal and make a presentation of the proposal before the end of the same semester. The dissertation work completed and submitted in the 4th semester will be assessed in the Semester end examination)