

**MA/M.Sc. IN ANTHROPOLOGY**  
**GOVT. AUTO COLLEGE, PHULBANI**  
**Total Marks =1800 Total Credits= 80**

Semester	Paper Code	Title of the paper	Total Marks (TE+IA)	No. of Credits
<b>1<sup>st</sup> SEMESTER 20 CREDITS (500 MARKS)</b>				
<b>I</b>	CC-1.1	Socio-Cultural Anthropology	80+20=100	04
	CC-1.2	Biological Anthropology-I	80+20 =100	04
	CC-1.3	Prehistoric Archaeology-1	80+20=100	04
	CC-1.4	Tribes of India	80+20=100	04
	CC-1.5	Practical -Biological and Forensic Science:- (Cranimetry, Mandibulometry, Somatometry and Somatoscopy, Deramtoglyphics)	100	04
<b>2<sup>nd</sup> SEMESTER 20 CREDITS (500 MARKS)</b>				
<b>II</b>	CC-2.1	Indian Society & Culture	80+20=100	04
	CC-2.2	Biological Anthropology-II	80+20=100	04
	CC-2.3	Prehistoric Archaeology –II & Museology	80+20=100	04
	CC-2.4	Ecological Anthropology	80+20=100	04
	CC-2.5	Practical – (Prehistoric Tools, Museology and Museum management,. Demographic data collection , Construction of Genealogy	100	04
<b>3<sup>rd</sup> SEMESTER 16 CREDITS (400 MARKS)</b>				
<b>III</b>	CC-3.1	Research Methodology	80+20=100	04
Gr. A	CE-3.2A	Advanced Socio-Cultural Anthropology	80+20=100	04
	CE-3.3A	Theories and Methods In Socio-Cultural Anthropology -I	80+20=100	04
	CE-3.4A	Practical: Tools and Techniques of data collection, Ethnographic report on any tribe	100	04
Gr. B	CE-3.2B	Fundamentals of Human Genetics	80+20=100	04
	CE-3.3B	Human Population Genetics	80+20=100	04
	CE-3.4B	Practical: Nutritional Assessment	100	04
Gr. C	CE-3.2C	Principles and Methods in Prehistoric Archaeology	80+20=100	04
	CE-3.3C	Prehistoric Archaeology and Palaeoanthropology of Africa and Europe	80+20=100	04
	CE-3.4C	Practical	100	04

**4<sup>th</sup> SEMESTER 16 CREDITS (400 MARKS)**

<b>IV</b>	CC-4.1	Forensic Anthropology	80+20=100	04
<b>Gr. A</b>	CE-4.2A	Linguistic Anthropology	80+20=100	04
	CE-4.3A	Theories and Methods In Socio-Cultural Anthropology -II	80+20=100	04
	CE-4.4A	Fieldwork and Dissertation	100	04
<b>Gr. B</b>	CE-4.2B	Medical Genetics	80+20=100	04
	CE-4.3B	Advanced Biological Anthropology	80+20=100	04
	CE-4.4B	Fieldwork and Dissertation	100	04
<b>Gr. C</b>	CE-4.2C	Field Techniques and Methods in Archaeology	80+20=100	04
	CE-4.3C	Prehistory and Protohistory of Eastern India	80+20=100	04
	CE-4.4C	Fieldwork and Dissertation	100	04

**CC- Core Courses**

**CE- Core Elective**

**Specialization:**

Gr. A- Social-Cultural Anthropology

Gr. B- Biological Anthropology

Gr. C- Archaeological and Palaeocultural Anthropology

**SEMESTER-I**  
**CC-1.1 SOCIO-CULTURAL ANTHROPOLOGY**

**Full Marks: 100**  
**End Term: 80 /3hr**  
**Mid Term: 20/1hr**

**Unit –I**

Meaning, Development and Scope of Anthropology, Core branches of Anthropology, Uniqueness of Anthropology, Relationship with other disciplines - History, Sociology, Psychology, Economics, Law and political Science, Biology, Geology.

**UNIT-II**

Aim and Scope of Socio-cultural Anthropology, History and Development; Major Areas of Interest: Ethnography, Ethnology, Business Anthropology, Linguistic Anthropology, Medical Anthropology, Urban Anthropology, Visual Anthropology, Applied and Action Anthropology.

**Unit -III**

The Nature of Society: Concept of Society; Social Institution; Social groups, status and role, social stratification, Social organization, social structure, social function, social system.

**Unit –IV**

Culture: Concept, Definition; Nature of Culture, Characteristics of Culture; Culture Change: Innovation, Diffusion, Acculturation, Assimilation, Attenuation, Integration, **Culture, Language and Communication**: Nature, origin and characteristics of language; verbal and non-verbal communication, Language and Culture. Study on Culture trait, Culture complex, Culture Area and culture pattern,

References

1. Beattie, John. 1966, *Other Cultures*, London: Routledge and Kegan Paul Ltd.
2. Balandier, George. 1970, *Political Anthropology*, New York: Pantheon Books
3. Bohannan, Paul. 1971, *Social Anthropology*, New York: Holt Rinehart & Winston.
4. Clifton, A.J. (ed.) 1968, *Introduction to Cultural Anthropology*. Houghton Mifflin
5. Carol R. Ember, Melvin Ember, Peter N. Peregrine, 2010, *Anthropology*, NJ: Prentice Hall.
6. Evans-Pritchard, E.E. and Fortes, M. 1940, *African Political Systems*, London: Oxford University Press.
7. Evans-Pritchard, E.E. 1979. *Social Anthropology*. London: Routledge and Kegan- Paul.
8. Firth, Raymond. 1967, *Themes in Economic Anthropology*, London: Tavistock Publications
9. Fox, Robin. 1984, *Kinship and Marriage: An Anthropological Perspective*, London: Cambridge University Press.
10. Gluckman, Max. 1965, *Politics, law & Ritual in Tribal Society*, Oxford: Basil Blackwell
11. Goode, J. 1982, *The Family*, New York: Prentice Hall
12. Haviland, W. A., Harald E. L. Prins, d.
13. Herskovits, M.J. 1958, *Man and His Works*, New York: Alfred A. Knopf.
14. Kapadia, K.M. 1966, *Marriage and Family in India*, London: Oxford University Press
15. Keesing and Keesing, 1971, *New Perspectives in Cultural Anthropology*, Holt: Rinehart and Winston
16. Mair, Lucy. 1972, *An Introduction to Social Anthropology*, London: Oxford University Press,

17. Mair, Lucy. 1962, *Primitive Government*, Vigo Street: Penguin Books
18. Murdock, G.P. 1949, *Social Structure*, London: Macmillan Co.
19. Nash, Manning, 1966, *Primitive & Peasant Economic Systems*, Chandler Pub. and Co.
20. Nayak, P.K. 1989, *Blood, Women and Territory*, New Delhi: Reliance Pub House
21. Needham R. (Ed.). 1971, *Rethinking Kinship and Marriage*. London: Tavistock
22. Norbeck, E. 1961. *Primitive Religion*. Longman Higher Education
23. Radcliffe–Brown, A.R. & Forde, D. (ed.) 1950, *African Systems of Kinship and Marriage*, New York: Oxford University Press
24. Rivers, W.H.R. 1914, *Kinship and Social Organization*, London: Constable and Co. Ltd.

## **CC-1.2-BIOLOGICAL ANTHROPOLOGY –I**

**Full Marks: 100**  
**End Term: 80 /3hr**  
**Mid Term: 20/1hr**

### **Unit - I**

Aims and Scope of Biological Anthropology, Historical development, Emerging trends in Biological Anthropology, Medical Anthropology and Human Genetics, Application of Biological Anthropology and Human Genetics in the service of the Nation.

### **Unit-II**

Theories of Evolution: Inorganic evolution, Organic evolution: Lamarckism, Darwinism, Synthetic theory; Principles of Evolution: Convergence, Divergence, Man and Primates: Man's place in Animal kingdom, Living Primate: Distribution, characteristics and classification of order primate;; **Unit – III**

Paleoanthropology: Stages of Human evolution: Processes of hominization and emergence of hominids; Characteristic features and cultural evidence of (a) Earliest primates Dryopithecus Early hominoids: Ramapithecus, Australopithecine, Homo habilis; (b) later hominids: Homo erectus (Asia, Europe and Africa), Homo-sapiens neanderthalensis (Classic/Conservative), Homo-sapiens-sapiens.

### **Unit-IV**

Structure and function of an animal cell; cell theory and cell division. Essentials of Genetics; Landmarks in the history of genetics, principles in human genetics Mendel's Laws of inheritance , Structure and function of DNA, Gene and Chromosomes.

### **Suggested Readings / Books Recommended:**

- Boaz N.T. and A.J. Almquist. 1997. *Biological Anthropology – A Synthetic Approach to Human Evolution*. Prentice-Hall, New Jersey, USA.
- Boaz N.T. and A.J. Almquist. 1997. *Biological Anthropology – A Synthetic Approach to Human Evolution*. Prentice-Hall, New Jersey, USA.
- Bogin B. (1999) *Patterns of human growth*. Cambridge University Press.
- Darwin, C. 1871. *The Descent of Man*, 2 Volumes, John Murray, London.

- Das B.M. 2008. Outlines of Physical Anthropology. Kitab Mahal, New Delhi.
- Hooten E. A., Up from the Ape. Revised Edition, xxii + 788. The Macmillan Company, New York, 1946
- Jurmain, R.; H. Nelson, L. Kilgore and W. Trevathan. 2011. Essentials of Physical Anthropology, Eight Edition. Wordsworth Cengage Learning, USA.
- Lasker, G. B. and R. N. Tyzzer. 1982. Physical Anthropology, Third Edition. C. B. S. College Publishing.
- Malhotra K.C. and B. Balakrishnan(1996) *Human Population Genetics in India*.
- Malina RM, Bouchard C, Oded B. (2004) Growth, Maturation, and Physical Activity. Human Kinetics.
- Montague, M. F. Ashley. 1960. An Introduction to Physical Anthropology. Charles C. Thomas Publisher. Springfield, Illinois, U. S. A.
- S.L. Washburn, Classification and human evolution, Aldine Transaction; New edition edition (July 31, 2007), ISBN-10: 0202309355
- Sarkar, R. M. 2004. Fundamentals of Physical Anthropology (New Edition).Book World. Kolkata
- Singh I. P. and Bhasin M.K. (1989). *Anthropometry: A Laboratory Manual on Biological Anthropology*. Kamla-Raj Enterprises, Chawri Bazar, Delhi.
- Srivastava, R. P. 2009. Morphology of the Primates and Human Evolution. PHI Learning Private Limited, New Delhi.

### **CC-1.3 PREHISTORIC ARCHAEOLOGY -I**

**Full Marks: 100**  
**End Term: 80 /3hr**  
**Mid Term: 20/1hr**

#### **UNIT- I**

Introduction, Definition and Scope of Prehistoric Archaeology; Relation with other disciplines, Methods of studying Prehistoric Archaeology.

#### **UNIT-II**

Methods of Estimation of Time and Reconstruction of the Past, Dating Methods: i) Absolute dating methods: Radiocarbon<sup>14</sup> dating (C<sup>14</sup>), Potassium-Argon, Thermoluminescence method; ii) Relative dating methods: Stratigraphy, Palaeontology, Palynology,.

#### **UNIT-III**

A brief outline on the origin of the earth and life, geological time scale, Geochronology of Pleistocene Epoch, Glacial and Interglacial; Pluviation and Inter Pluviation.

## Unit-IV

Typology and Technology in Prehistoric Archaeology:

Typology of stone tools: Paleolithic (Choppers, Hand axes, Cleavers and Scrapers), Mesolithic (Non-geometric and Geometric microliths), Neolithic (Axe, Adze, Chisel, Ring stones).

Prehistoric Technology: Manufacturing techniques of Prehistoric stone tools: primary and combination fabrication techniques.

### Suggested Readings / Books Recommended:

1. Aiyappan, A. and S.T. Satyamurti (Ed), 1960, *Handbook of Museum Technique*, Government Museum, Madras.
2. Banerjee N. R. *Museum and Cultural Heritage in India*
3. Basa K.K., Md. Rehan, R.K. Gupta 2007, *Museology A Comprehensive Bibliography and Webliography*, Serial Publications, New Delhi.
5. Behera, B.K. and S.K. Mohanty, 2007 *Museology and Museum Management in India*, Mayur Publications, Bhubaneswar, Orissa.
3. Bhattacharya, D.K. *An Introduction to Prehistoric Archaeology*
4. Bhattacharya, D.K. , *The Old Stone Age Tools*
5. Bhatnagar, A.1999, *Museum, Museology and New Museology*, Sandeep Prakashan, New Delhi.
6. Burkitt, M.C. *The Old Stone Age*
7. Diwvedi, V. P. and G.N. Pant(Ed) 1980, *Museum and Museology: New Horizon*, Agam Kala Prakashan, New Delhi.
8. Ghoshmaulik, and S.K. Mishra 1987, *Practical Anthropology*, SAAS, Orissa.
9. Ghoshmaulik, S.K. and K. K. Basa (Ed) 2001, *Understanding Heritage: Role of Museum, Academic staff Collage*, Utkal University, Bhubaneswar, India.
10. Joukowsky, Martha *Field Archaeology: Tool and Techniques of Field Work for Archaeologists*.
11. Nair, S. M., *Bio-Deteriorations of Museum Materials*, Agam Kala Prakashan, New Delhi.
12. Nigam, M. L., 1985 *Fundamentals of Museology*, Deva Publications, Hyderabad.
13. Oakley, K. P. 1975, *Man the Tool-maker, Trustees of British Museum (Natural History)*, London
14. Rammi Reddy, V. *Elements of Prehistory*
15. Renfrew, C. and P. Bahn *Archaeology: Theories, Methods and Practice*
16. Shankalia, H.D. *Stone Age Tools and Techniques*, Deccan Collage Pooana. India

## CC-1.4 TRIBES OF INDIA

**Full Marks: 100**  
**End Term: 80 /3hr**  
**Mid Term: 20/1hr**

### Unit-I:

Concept of tribes and its problematic nature, General and specific characteristics of tribes, Classification and distribution of tribes based on Territory, Language, Economy, Religion and Race, Particularly Vulnerable Tribal Groups (PVTGs).

### Unit II:

Constitutional safeguards for Scheduled Tribes, History of administration of tribal areas, tribal policies, plans, programmes of tribal development, Problems of exploitation and deprivation of scheduled caste/ tribe and Other Backward, Role of anthropology in tribal and rural development

### UNIT -III

**Problems of the tribal Communities**—Land alienation, poverty, indebtedness, low literacy, poor educational facilities, unemployment, under-employment, health and nutrition. Development of forest policy and tribals, Impact of Urbanisation and Industrialization on tribal populations.

### UNIT-IV

Social change among the tribes during colonial and post-Independent India, Social change and contemporary tribal societies: Impact of modern democratic institutions, development programmes and welfare measures on tribals and weaker sections, Tribal movements.

### **Suggested Readings**

1. Gupta D. (1991). Social Stratification. Oxford University Press: Delhi.
2. Madan V. (2002). The Village in India. Oxford University Press: Delhi.
3. Nathan D. (1998). Tribe-Caste Question. Simla: IAS.
4. National Tribal Policy (draft). (2006). Ministry of Tribal Affairs. Government of India.
5. Patnaik S.M. (1996). Displacement, Rehabilitation and Social change. Inter India Publication, Delhi.
6. Shah G. (2002). Social Movement and the State. Delhi: Sage.
7. Shanin T. (1987). Peasants and Peasantry. New York, Blackwell.
8. Vidyarthi L.P. and Rai B.K. (1985) Tribal Culture in India, New Delhi, Concept Publishing Company.
9. Wolf E. (1966). Peasants. NJ, Prentice Hall.

**CC- 1.5 PRACTICAL:**

**Full Marks-100**

**Duration: 6 Hrs**

**Somatometry**

- |                                 |                                       |
|---------------------------------|---------------------------------------|
| 1. Maximum head length          | 9. Physiognomic facial height         |
| 2. Maximum head breadth         | 10. Morphological facial height       |
| 3. Minimum frontal breadth      | 11. Physiognomic upper facial height  |
| 4. Maximum bi-zygomatic breadth | 12. Morphological upper facial height |
| 5. Bi-genial breadth            | 13. Head circumference                |
| 6. Nasal height                 | 14. Stature                           |
| 7. Nasal length                 | 15. Sitting height                    |
| 8. Nasal breadth                | 16. Body weight                       |

**Somatoscopy:**

- |              |                |                |                |
|--------------|----------------|----------------|----------------|
| 1. Head form | 2. Hair form   | 3. Facial form | 4. Eye form    |
| 5. Nose form | 6. Hair colour | 7. Eye colour  | 8. Skin colour |

**Craniometry:**

- |                                |                         |
|--------------------------------|-------------------------|
| 1. Maximum cranial length      | Maximum cranial breadth |
| 2. Maximum bizygomatic breadth | Maximum frontal breadth |
| Minimum frontal breadth        | Nasal height            |
| Nasal breadth                  | Bi-mastoid breadth      |
| Greatest occipital breadth     | Upper facial height     |
| Cranial index                  | Nasal index             |

**1. Mandibulometry:**

Bicondylar Breadth, Bigonial breadth, Length of lower jaw, chin height or symphyseal height, Condylar height of ramus, Mandibular angle.

***Suggested Readings :***

1. Jurmain R., Kilgore L., Trevathan W., Ciochon R.L. (2012). Introduction to Physical Anthropology Wadsworth Publ., USA
2. Kroeber A. L. (1948). Anthropology. Oxford & IBH Publishing Co., New Delhi.
3. Stanford C., Allen J.S. and Anton S.C. (2010). Exploring Biological Anthropology. The Essentials. Prentice Hall Publ, USA.
4. Statement on Race: Annotated Elaboration and Exposition of the Four Statements on Race (1972). Issued by UNESCO. Oxford University Press.

## **SEMESTER-II**

### **CC-2.1 Indian Society & Culture**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

#### **Unit –I**

Indian Society: Origin and Composition, Unity in Diversity, Indian Social Values, Roots of Indian Culture: Concept of Bharat Varsha: Religious Faith and Beliefs, Characteristics of Indian Culture.

#### **Unit –II**

The structure and nature of traditional Indian social system—Varnashram, Purushartha, Karma, Rina and Rebirth, Caste system in India— Structure and characteristics, Varna and caste, Theories of origin of caste system, Caste mobility, Future of caste system, Jajmani system.

#### **Unit-III**

Indian Tradition and Social Structure; Great tradition and Little tradition; Universalization and Parochialization; Sacred complex; Nature-man-spirit-complex; Tribe-caste continuum; Dominant caste.

#### **Unit-IV**

Processes of Socio-cultural Change in India; Sanskritization; Westernization; Modernization, Secularization and Democratization, Globalization and its impact on Indian Society

#### **Suggested Reading**

1. Evans-Pr itchard, E.E. Social Anthropology.
2. Honnigman, J. Handbook of Social and Cultural Anthropology.
3. Fox, Robin. Kinship and Marriage.
4. Sahl ins & Service. Evolution and Culture. The Univer sity of Michigan Press, Ann Arbor.
5. Mair, Lucy. An Introduction to Social Anthropology, Oxford University Press.
6. Barth, F. Ethnic Group Boundaries.
7. Barnet, H.G. Innovation. The Basis of Culture Change.
8. Rogers, E.M. & Shoe Maker, F.F. Communication of Innovation.
9. Rogers, E.M., Diffusion of Innovation.
10. Rad-cl if fe Brown, A.R. Structure and Function in Primitive Society.
11. Harris, Marvin. Cultural Anthropology.
12. Mal inowski, B.K. Scientific Theory of Culture and Other Essays.
13. Foster, G.M. Tradition, Cultures and Impact of Technological Change.
14. Dalton, George. Tribal and Peasant Economies: Readings in Economic Anthropology.
15. Kluckhohn, C. Mirror for Man

## CC-2.2- BIOLOGICAL ANTHROPOLOGY –II

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

### Unit – I

Concept of Race & UNESCO Statement on Race, Characteristics of Major races of the world: Caucasoid; Negroid; Mongoloid; Racial classifications by Hooton; Coon, Garn and Birdsell; Racial classification of Indian Population by Risley, Guha and Sarkar; Relevance of race in 21st Century.

### Unit-II

Concept of Biological Variability; Race, Hardy-Weinberg Law; Sources of Genetic Variation; Structuring Genetic Variation; Interpretation of Human Variation, Polymorphism (Physiological, Serological, Biochemical and DNA Markers)

### Unit-III

Demographic Anthropology: Meaning of Demography, The scope and methods of population study, Principle of Population Study; Sources of Demographic Data: Census, Registration, Dual Registration, Life Tables; Demographic Processes: Fertility, Mortality and Migration, Demographic profile of Indian populations and its growth structure.

### Unit-IV

Nutritional Anthropology: Meaning of Nutrition, Evolution of Human diet, Concept of balanced diet, Bio-cultural factors influencing the diseases and nutritional status. Concept of Human Growth, development, differentiation and maturation; Prenatal and Postnatal Period of growth; Bio-Cultural factors (genetic, social, and ecological factors) influencing growth and variation.

### Suggested Reading

1. Bhende A. and T. Kantikar (2006) *Principles of Population Studies*. Himalayan Publishing House, Mumbai
2. Bogin B. (1999). *Pattern of Human Growth*. 2nd edition CUP.
3. Cameron Noel and Barry Bogin (2012) *Human Growth and development*. Second edition, Academic Press Elsevier.
4. Cameron Noel and Barry Bogin (2012) *Human Growth and development*. Second edition, Academic Press Elsevier.
5. Cummings Michael R. (2009). *Human Genetics*. Cengage Learning India Pvt. Ltd, Delhi.

6. Cummings MR (2011). *Human Heredity: Principles and Issues*. Brooks/Cole, Cengage Learning
7. Harrison G.A., Tanner, J.M., Pilbeam, D.R., Baker, P.T. (1988) *Human Biology*. Oxford University Press.
8. Jurmain R, Kilgore L, Trevathan W. *Essentials of physical anthropology*. Wadsworth publishing.
9. Standford C.; Allen J.S. and Anton S.C. (2012). *Biological Anthropology: The Natural History of Mankind*. PHI Learning Private Limited, New Delhi.
10. *Statement on Race: Annotated Elaboration and Exposition of the Four Statements on Race* (1972). Issued by UNESCO. Oxford University Press.
11. Stein P.L. and B.M. Row. 1974. *Physical Anthropology*. McGraw-Hill Inc., USA.
12. Swindler D. R. (2009). *Introduction to the Primates*. Overseas Press India Pvt. Ltd., New Delhi.
13. Das B.M. 2008. *Outlines of Physical Anthropology*. Kitab Mahal, New Delhi.

### **CC-2.3 Prehistoric Archaeology –II & Museology**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

#### **Unit-I**

Palaeolithic Cultures of Africa and South Asia (India): Pebble tool Culture in Africa (evidences from Olduvai Gorge); Pebble tool culture in India (evidences from Sohan Valley); Acheulian Culture of Peninsular India.

#### **Unit-II**

Mesolithic Cultures of Europe and India: (evidences from Azilian, Tardenoisean, Austurian, Sauveterrean, Larnian, Meglemosean, Kitchen – Midden, Champignian and Ertboll)

Mesolithic Cultures in India: (evidences from Teri Sites, Birbhanpur, Bagor, Bhimbetka, Adamgarh, Sarai Nahar Rai, Chopani Mando, Mahadaha.)

Neolithic Culture of Indian Subcontinent (evidences from Northern, Southern, Eastern and Northeastern India)

#### **Unit-III**

Proto-historic Cultures of South Asia (India): Chalcolithic Cultures of India – Central Indian Chalcolithic; Deccan Chalcolithic;

Harappan Civilization: Origin, Extent, distribution, Salient features, Causes of decline and Chronology of the Indus Civilization.

## **Unit-IV:**

### **Museum, Museology**

Museum and Museology: Meaning, Definition, Nature and Scope; Classification of Museums in India—National Museum, State Museum, University Museum, Specialized Museums in India.

### **Conservation of Cultural Resources in Museum:**

Causes of Decay and Deterioration, Care and Handling, Cleaning and Repairing, Packing and Shifting of Museum Objects; Preservation of Organic and Inorganic Objects in Museums.

### **Suggested Readings / Books Recommended:**

1. Aiyappan, A. and S.T. Satyamurti (Ed), 1960, *Handbook of Museum Technique*, Government Museum, Madras.
2. Banerjee N. R. *Museum and Cultural Heritage in India*
3. Basa K.K., Md. Rehan, R.K. Gupta 2007, *Museology A Comprehensive Bibliography and Webliography*, Serial Publications, New Delhi.
5. Behera, B.K. and S.K. Mohanty, 2007 *Museology and Museum Management in India*, Mayur Publications, Bhubaneswar, Orissa.
3. Bhattacharya, D.K. *An Introduction to Prehistoric Archaeology*
4. Bhattacharya, D.K. , *The Old Stone Age Tools*
5. Bhatnagar, A.1999, *Museum, Museology and New Museology*, Sandeep Prakashan, New Delhi.
6. Burkitt, M.C. *The Old Stone Age*
7. Diwvedi, V. P. and G.N. Pant(Ed) 1980, *Museum and Museology: New Horizon*, Agam Kala Prakashan, New Delhi.
8. Ghoshmaulik, and S.K. Mishra 1987, *Practical Anthropology*, SAAS, Orissa.
9. Ghoshmaulik, S.K. and K. K. Basa (Ed) 2001, *Understanding Heritage: Role of Museum, Academic staff Collage*, Utkal University, Bhubaneswar, India.
10. Joukowsky, Martha *Field Archaeology: Tool and Techniques of Field Work for Archaeologists*.
11. Nair, S. M., *Bio-Deteriorations of Museum Materials*, Agam Kala Prakashan, New Delhi.
12. Nigam, M. L., 1985 *Fundamentals of Museology*, Deva Publications, Hyderabad.
13. Oakley, K. P. 1975, *Man the Tool-maker, Trustees of British Museum (Natural History)*, London
14. Rammi Reddy, V. *Elements of Prehistory*
15. Renfrew, C. and P. Bahn *Archaeology: Theories, Methods and Practice*
16. Shankalia, H.D. *Stone Age Tools and Techniques*, Deccan Collage Poon. India

## **CC-2.4 Ecological Anthropology**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

### **Unit- I**

Ecological Anthropology: Definition and Scope; History and Development of Ecological Anthropology; Concepts and Perspectives of Ecology: Cultural Ecology, Population Ecology, Systems Ecology, Ethno Ecology, Palaeo Ecology, Social Ecology.

### **Unit- II**

Methods of studying human ecology, Adaptation to various ecological stresses: heat, cold and high altitude; Ecological rules and their applicability to human populations. Culture as a tool of adaptation;

### **Unit- III**

Various modes of human adaptation in pre-state societies; (i) Hunting and food gathering (ii) Pastoralism and (iii) Shifting cultivation and Agriculture and peasantry . Ecological themes of state formation: i. Neolithic revolution, ii. Hydraulic Civilization, Impact of urbanization and industrialization on Man.

### **Unit- IV**

Environmental Problems: Causes and Consequences of degradation of Land, Water, Air, Forest and Bio-Diversity Resources; Global Warming, Green House Effect and Environmental pollution;

### **Suggested Reading**

1. Human ecology: biocultural adaptation in human communities. (2006) Schutkowski, H. Berlin. Springer Verlag.
2. Human ecology and cognitive style: comparative studies in cultural and physical adaptation. (1976).Berry, J.B. New York: John Wiley.
3. Human ecology. (1964) Stapledon. Faber & Faber.
4. Studies in Human Ecology. (1961) Theodorson, G.A. Row, Peterson & Company Elmsford, New York.
5. Human ecology: (1973) Problems and Solutions. Paul R. Ehrlich, Anne H. Ehrlich and John P. Holdress. W.H. Freeman & Company, San Francisco.
6. Cohen, Yehudi A. 1968. Man in adaptation; the cultural present. Chicago: Aldine Pub. Co.
7. Redfield, Robert. (1965). Peasant society and culture an anthropological approach to civilization. Chicago [u.a.]: Univ. of Chicago Press.
8. Symposium on Man the Hunter, Richard B. Lee, and Irven DeVore. 1969. Man the hunter. Chicago:Aldine Pub. Co.

9. Dave Deeksha & S.S. Katewa (2012). Text Book of Environmental Studies. Cengage Learning India Pvt. Ltd., Delhi

## **CC-2.5 PRACTICAL: Prehistoric Archaeology and Museology**

**Full Marks: 100**

**Duration of Examination: 6 hours**

The general practical shall include the following components with distribution of marks indicated against each section:

### **SECTION (A): Prehistoric Archaeology**

1. Drawing and description of given Prehistoric lithic tools / artifacts
2. Stone tool technologies and major typologies of stone tools.
3. Practical Records
4. Viva-Voce

### **SECTION (B): Museology**

1. Drawing, labeling, description and conservation of given museum Specimens
3. Preservation of Organic and Inorganic Objects in Museums.
4. Practical Records:
5. Viva-Voce

### **Suggested Readings / Books Recommended:**

1. Aiyappan, A. and S.T. Satyamurti (Ed), 1960, *Handbook of Museum Technique*, Government Museum, Madras.
2. Banerjee N. R. *Museum and Cultural Heritage in India*
3. Basa K.K., Md. Rehan, R.K. Gupta 2007, *Museology A Comprehensive Bibliography and Webliography*, Serial Publications, New Delhi.
5. Behera, B.K. and S.K. Mohanty, 2007 *Museology and Museum Management in India*, Mayur Publications, Bhubaneswar, Orissa.
3. Bhattacharya, D.K. *An Introduction to Prehistoric Archaeology*
4. Bhattacharya, D.K. , *The Old Stone Age Tools*
5. Bhatnagar, A.1999, *Museum, Museology and New Museology*, Sandeep Prakashan, New Delhi.
6. Burkitt, M.C. *The Old Stone Age*
7. Diwvedi, V. P. and G.N. Pant(Ed) 1980, *Museum and Museology: New Horizon*, Agam Kala Prakashan, New Delhi.
8. Ghoshmaulik, and S.K. Mishra 1987, *Practical Anthropology*, SAAS, Orissa.
9. Ghoshmaulik, S.K. and K. K. Basa (Ed) 2001, *Understanding Heritage: Role of Museum, Academic staff Collage*, Utkal University, Bhubaneswar, India.
10. Joukowsky, Martha *Field Archaeology: Tool and Techniques of Field Work for Archaeologists*.
11. Nair, S. M., *Bio-Deteriorations of Museum Materials*, Agam Kala Prakashan, New Delhi.
12. Nigam, M. L., 1985 *Fundamentals of Museology*, Deva Publications, Hyderabad.
13. Oakley, K. P. 1975, *Man the Tool-maker, Trustees of British Museum (Natural History)*, London

14. Rammi Reddy, V. *Elements of Prehistory*
15. Renfrew, C. and P. Bahn *Archaeology: Theories, Methods and Practice*
16. Shankalia, H.D. *Stone Age Tools and Techniques*, Deccan Collage Poona. India

### **SEMESTER-III**

#### **CC-3.1 Research Methodology**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

##### **Unit I:**

Field work tradition in Anthropology; Ethnographic approach, contribution of Malinowski, Boas and other pioneers; cultural relativism, ethnocentrism, etic and emic perspectives, techniques of rapport establishment identification of representative categories of informants,

##### **Unit II:**

Research Design; Review of literature, conceptual framework, formulation of research problem, formulation of hypothesis, sampling, tools and techniques of data collection: Survey method, Observation, Questionnaire, Schedule, Interview, Case study, Life history and Genealogy; data analysis and report writing-Chapterization, preparing a text for submission and publication, concepts of preface, notes (end and footnotes), glossary, prologue and epilogue, appendix, bibliography(annotated) and references cited, review and index.

##### **Unit III:**

Ethics and Politics of Research; Identify, define, and analyze ethical issues in the context of human subject research; Ethical importance of consent, privacy and confidentiality in research; Issues of academic fraud and plagiarism, conflicts of interest, authorship and publication.

##### **Unit IV:**

Bio-Statistics; Guiding ideals and critical evaluation of major approaches in research methods, basic tenets of qualitative research and its relationship with quantitative research; Types of variables, presentation and summarization of data (tabulation and illustration). Descriptive statistics- Measurers of Central Tendency, Measure of Variation, Tests of Inference- Variance ratio test, Student's 't' tests, Chi-square test.

##### **Suggested Readings**

1. Garrard E and Dawson A. What is the role of the research ethics committee? Paternalism, inducements, and harm in research ethics. *Journal of Medical Ethics* 2005; 31: 419-23.

2. Bernard H.R. Research Methods in Anthropology, Qualitative and Quantitative Approaches. Jaipur: Rawat Publications. 2006.
3. Madrigal L. Statistics for Anthropology. Cambridge: Cambridge University Press. 2012.
4. Zar JH. Biostatistical Analysis. Prentice Hall. 2010.
5. Michael A. The Professional Stranger. Emerald Publishing. 1996.
6. Bernard R. Research Methods in Anthropology: Qualitative and Quantitative Approaches. AltaMira Press. 2011.
7. Emerson RM, Fretz RI and Shaw L. Writing Ethnographic Fieldnotes. Chicago, University of Chicago Press. 1995.
8. Lawrence NW. Social Research Methods, Qualitative and Quantitative Approaches. Boston: Allyn and Bacon. 2000.
9. O'reilly K. Ethnographic Methods. London and New York: Routledge. 2005.
10. Patnaik S.M. Culture, Identity and Development: An Account of Team Ethnography among the Bhil of Jhabua. Jaipur: Rawat Publications. 2011.
11. Pelto PJ and Pelto GH. Anthropological Research, The Structure of Inquiry. Cambridge: Cambridge University Press. 1978.
12. Sarantakos S. Social Research. London: Macmillan Press. 1998.

## **GROUP –A**

### **CE-3.2A Advanced Socio-Cultural Anthropology**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

#### **Unit-I**

**Family :** Definition and universality; Family, household and domestic groups; functions of family; Types of family (from the perspectives of structure, blood relation, marriage, residence and succession)

**Marriage :** Definition and universality; Laws of marriage (endogamy, exogamy, hypergamy, hypogamy, incest taboo); Type of marriage (monogamy, polygamy, polyandry, group marriage). Functions of marriage; Marriage regulations (preferential, prescriptive and proscriptive); Marriage payments (bride wealth and dowry).

#### **Unit-II**

**Kinship: :** Consanguinity and Affinity; Principles and types of descent (Unilineal, Double, Bilateral, Ambilineal); Forms of descent groups (lineage, clan, phratry, moiety and kindred); Kinship terminology (descriptive and classificatory); Descent, Filiation and Complimentary Filiation; Decent and Alliance.

#### **Unit-III**

**Economic Organization :** Meaning, scope and relevance of economic anthropology; Formalist and Substantivist debate; Principles governing production, distribution and exchange

(reciprocity, redistribution and market), in communities, subsisting on hunting and gathering, fishing, swiddening, pastoralism, horticulture, and agriculture; globalization and indigenous economic systems..

**Political Organization and Social Control :** Band, tribe, chiefdom, kingdom and state; concepts of power, authority and legitimacy; social control, law and justice in simple Societies.

#### **Unit-IV**

**Religion :** Anthropological approaches to the study of religion (evolutionary, psychological and functional); monotheism and polytheism; sacred and profane; myths and rituals; forms of religion in tribal and peasant Societies (animism, animatism, fetishism, naturism and totemism); religion, magic and science distinguished; magico-religious functionaries (priest, shaman, medicine man, sorcerer and witch)

#### **Books Recommended:**

1. Beattie, John. 1966, *Other Cultures*, London: Routledge and Kegan Paul Ltd.
2. Balandier, George. 1970, *Political Anthropology*, New York: Pantheon Books
3. Bohannan, Paul. 1971, *Social Anthropology*, New York: Holt Rinehart & Winston.
4. Clifton, A.J. (ed.) 1968, *Introduction to Cultural Anthropology*. Houghton Mifflin
5. Carol R. Ember, Melvin Ember, Peter N. Peregrine, 2010, *Anthropology*, NJ: Prentice Hall.
6. Evans-Pritchard, E.E. and Fortes, M. 1940, *African Political Systems*, London: Oxford University Press.
7. Evans-Pritchard, E.E. 1979. *Social Anthropology*. London: Routledge and Kegan- Paul.
8. Firth, Raymond. 1967, *Themes in Economic Anthropology*, London: Tavistock Publications
9. Fox, Robin. 1984, *Kinship and Marriage: An Anthropological Perspective*, London: Cambridge University Press.
10. Gluckman, Max. 1965, *Politics, law & Ritual in Tribal Society*, Oxford: Basil Blackwell
11. Goode, J. 1982, *The Family*, New York: Prentice Hall
12. Haviland, W. A., Harald E. L. Prins, d.
13. Herskovits, M.J. 1958, *Man and His Works*, New York: Alfred A. Knopf.
14. Kapadia, K.M. 1966, *Marriage and Family in India*, London: Oxford University Press
15. Keesing and Keesing, 1971, *New Perspectives in Cultural Anthropology*, Holt: Rinehart and Winston

### **CE-3.3A Theories and Methods in Socio-Cultural Anthropology- I**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

#### **Unit-I**

Emergence of Anthropology as a Discipline: Formulatory Period, Convergent Period, Constructive Period, and Critical Period , Origin, History and Development of Anthropology in India

## **Unit-II**

Outline of Approaches to the study of culture: Evolutionism: Tylor, Morgan, Spencer, Neo-Evolutionism- Leslie White, Julian Steward, V. Gordon Childe.

## **Unit-III**

Diffusionism: British (G.E. Smith, W.J. Perry, W.H.R. Rivers), Austro-German (F.Ratzel, L. Frobenius, F. Graebner, F.W. Schmidt) and American (F. Boas, C. Wissler, A.L. Kroeber)

## **Unit-IV**

Emergence of Fieldwork Tradition, Historical Particularism, Anthropological studies of Indian civilization –R. Redfield, L.P Vidyarthi, M.N Srinivas, Mckim Marriot, S.C. Roy. D.N. Majumdar.

### **Suggested Readings / Books Recommended:**

1. Montagu. M.F. Ashley, 1957, *Anthropology and Human Nature*, Boston
2. Manners, Robert A. and Kaplan David, 1969, *Theory in Anthropology*, London: Routledge and Kegan Paul
3. M.F.Ashley Mantagu, 1974, *Frontiers of Anthropology*
4. W. La. Barre *The Human Animal*
5. N.A. Chagam & W.Irons (eds) *Evolutionary Biology and Human Social Behaviour*
5. C. Darwin *The Descent of Man*
6. E.E.Evans, Pritchard, 1951, *Social Anthropology*, Glencoe
7. R.Fox *Biosocial Anthropology*
8. A.C. Haddon *Theoretical Anthropology*
9. L. Hodder *Reading the Past*
10. Frederick S. Hulse *Man and Nature: Studies in the Evolution of Human Species*
11. C. Kramer *Ethno-archaeology*
12. Annemarie de Wail, *Malefjt Images of Man*
13. Malthus, Hxley Osborn *The Essays on Production*
14. T.K. Penninman *One Hundred Years of Anthropology*
15. T.S. Slotkin *Readings in Early Anthropology*
16. G.W. Stocking(Jr.) *Race, Culture and Evolution*
17. F.W. Voget *History of Ethnology*
18. R.A.Watson & P.J. Watson *Man and Nature: An Anthropological Essay in Human Ecology*
19. J.Wilson *Social Biology*

## **CE- 3.4A**

### **Practical:**

#### **Tools and Techniques of Data Collection**

Methods and Techniques of Social Anthropology: The practical will include the following techniques and methods in collection of data in Social Anthropology.

1. Observation
2. Interview

3. Questionnaire and Schedule
4. Case study
5. Life history

### **Suggested Readings**

1. Beattie J. (1964). *Other Cultures*. London: Cohen & West Limited.
2. Bernard H.R. (1940). *Research Methods in Cultural Anthropology*. Newbury Park: Sage Publications.
3. Davis K. (1981). *Human Society*. New Delhi: Surjeet Publications.
4. Delaney C. (2004). 'Orientation and disorientation' In *Investigating Culture: An Experiential Introduction to Anthropology*. Wiley-Blackwell.
5. Ember C. R. et al. (2011). *Anthropology*. New Delhi: Dorling Kindersley.
6. Ferraro G. and Andreatta S. (2008). In *Cultural Anthropology: An Applied Perspective*. Belmont: Wadsworth.
7. Haviland, Prins, Walrath, McBride (2007). *Introduction to Anthropology*. Cengage Learning India Pvt. Ltd., New Delhi
8. Haviland, Prins, Walrath, McBride (2008). *Cultural Anthropology*. Cengage Learning India Pvt. Ltd., New Delhi
9. Karen O'reilly. (2012). 'Practical Issues in Interviewing' *Ethnographic Methods*. Abingdon: Routledge
10. Lang G. (1956). 'Concept of Status and Role in Anthropology: Their Definitions and Use. *The American Catholic Sociological Review*.17(3): 206-218

## **GROUP –B**

### **CE-3.2B Fundamentals of Human Genetics**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

#### **Unit-I**

Structure, Function and Inheritance of the human gene, DNA structure and replication, DNA repair and recombination, gene expression

#### **Unit-II**

Expression of genetic information: from Transcription to Translation – the relationship between genes and protein, transcriptions; transcription and RNA processing, encoding genetic information, decoding the codons: the role of transfer RNAs.

#### **Unit-III**

Methods of Genetic Study in Human: Pedigree analysis and expressivity; Chromosomal Basis of Genetic Disorders (Karyotypes and identification of chromosome variation; cytogenetic mapping), Genetic mapping (Microsatellite and other DNA polymorphisms), PCR, concept of non-mendelian inheritance and complex diseases.

#### **Unit-IV**

Genomic Diversity & Human Evolution Genomic Variation: Genomic Polymorphisms (SNPs, VNTR, CNVs, etc); haplotypes and haplogroups; genotype-phenotype correlations, epigenetics

#### **Suggested Readings / Books Recommended:**

1. Muller, R. F. And I. D. Young. 2001. *Emery's Elements of Medical Genetics*, 11th Edition. Churchill Livingstone.
2. Primose, S. B. and R. M. Twyman. 2006. *Principles of Gene Manipulation and Genomics*, Seventh Edition. Blackwell Publishing, USA.
3. Crawford, M. (Ed). 2006 *Anthropological Genetics*. Cambridge University Press.
4. Brown, T. A. 2002. *Genomes 2 Edition*. Wiley-Liss, UK.
5. Jobling M. A., M. E. Hurles and C. Tyler-Smith. 2004. *Human Evolutionary Genetics: Origins, Peoples & Disease*. Garland Science. New York.
6. Sudbery, P. 2009. *Human molecular genetics*, 2nd Edition. Pearson (LPE).
7. Cummings, M. R. 2009. *Human Genetics*. Cengage Learning. USA
8. Lewin, B. 2008. *Genes IX*. Jones and Bartlett Publishers, Sudbury, Massachusetts.
9. Cavalli-Sforza, L. L. & W. Bodmer-*Evolution, Genetics and Man*.

### **CE-3.3B Human Population Genetics**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

#### **Unit-I**

Hardy-Weinberg principle; Genotypic and allelic frequencies, assumptions of Hardy-Weinberg equilibrium, its applications and exceptions. Mechanism for dynamics in Gene Frequency mutation, selection (pattern and mechanism), Genetic drift ,Gene flow/migration, inbreeding (inbreeding co-efficient and its genetic consequences).

#### **Unit -II**

Ecological Genetics and Polymorphism; phenotypic & genotypic polymorphisms, transient polymorphism, balanced polymorphisms, models explaining the maintenance of genetic polymorphism (Relationship between sickle cell and malaria, X-linked polymorphism, selection due to infectious diseases and its association with blood groups and other).

#### **Unit- III**

Population structure and admixture in human populations random & non-random mating ,heritability, linkage disequilibrium, genetic markers utility of genetic markers in forensic, population and disease association studies.

#### **Unit -IV**

Human evolutionary genetics From Mendel to molecules: A brief history of evolutionary genetics, Epistasis and the conversion of genetic variances, Human-Ape comparisons.

### **Suggested Readings**

1. Brooker R.J. (2012). *Genetics: analysis & principles*. The McGraw-Hill Companies, Inc 4th ed.
2. Cavalli-Sforza, L.L. and Bodmer, W.F (1971). *The Genetics of Human Population*. San Francisco: Freeman
3. Cooper DN and Kehrer-Sawatzki H. (2008). *Handbook of Human Molecular Evolution*. John Wiley & Sons, volume-2.
4. Crawford MH (2007). *Anthropological Genetics Theory, Methods and Applications*. Cambridge University Press
5. Cummings M.R. (2011). *Human Heredity: Principles and Issues*. Ninth Edition. Brooks/Cole, Cengage Learning
6. Jobling, M.A. Hurlst M. and Tyler-Smith C. (2004). *Human Evolutionary Genetics: Origins, Peoples & Disease*. GS. NY
7. Lewis R. (2009). *Human Genetics: Concepts and Applications* 9th Edition. The McGraw–Hill Companies, Inc.
8. Patch C. (2005). *Applied Genetics in Healthcare*. Taylor & Francis Group
9. Relethford J.H. (2012). *Human Population Genetics*. Wiley-Blackwell, USA
10. Snustad .D.P. and Simmons M.J. (2006). *Principles of Genetics*, Fourth Edition, John Wiley & Sons USA, Hoboken NJ
11. Strachan T, Read A.P. (2004). *Human Molecular Genetics*. Garland Science/Taylor & Francis Group.
12. Vogel F. and Motulsky A.G. (1996). *Human Genetics*. Springer, 3rd revised edition.

### **CE-3.4B**

#### **Practical**

1. Assessment of daily nutrient intake (Weighing method)
2. Evaluate association of nutritional status and physical performance
3. Demonstrate cultural perspective for preference of specific food of a population

### **GROUP-C**

#### **CE-3.2C PRINCIPLES AND METHODS IN PREHISTORIC ARCHAEOLOGY**

**Full Marks: 100**

**End term: 80 /4hr**

**Mid term: 20/1hr**

**UNIT-I:** Meaning and perspectives: Definition, scope and assumptions of Archaeology, History and development of Archaeology, Kinds of Archaeology.

Prehistoric Archaeology: Meaning, concepts and scope of prehistoric Archaeology, Chronological division of Cenozoic Era and events of the Pleistocene.

**UNIT-II:** Environmental Archaeology: Main factors of the human environment; Studying the Landscape: Glaciated landscapes; Varves, Rivers, Cave Sites, Sediments and Soils.

Reconstruction of palaeo-environment of plant (Micro botanical and Macro botanical remains), animal (Micro fauna and Macro fauna) and human (Human modification of the living area, human exploitation of wider environment and human impact on island environment).

**UNIT-III:** Geo-archaeology: Basic principles and study components in geo-archaeology; analytical procedures in geo-archaeology;

Understanding Soil and Sediments: Physical features, Chemical features, Physical weathering and types of sediments; Chemical weathering and formation of main types of soil.

**UNIT-IV:** Formation processes in Archaeology and Ethno-Archaeology: Archaeological sites and its formation: Basic categories of Archaeological evidences; Types of sites and their contexts; Cultural formation processes and Natural / environmental formation processes in Archaeology.

Ethno-archaeology: Meaning, scope and approaches of ethno-archaeology; Ethnoarchaeology in India with special reference to Orissa.

**Recommended Books:**

1. Aitken, M.J. 1974, *Physics and Archaeology*. Oxford: Clarendon Press, London.
3. Binford, S.R. and L.R. Binford 1968, *New Perspectives in Archaeology*. Chicago: Aldine.
4. Burkitt, M.C. 1985. *The Old Stone Age A Study of Palaeolithic Times*. New Delhi: Rupa & Co.
5. Butzer, Karl, W 1971, *Environment and Archaeology, An Ecological Approach to Prehistory*. Chicago: Aldine.
6. Butzer, Karl, W. 1987. *Archaeology as Human Ecology: Methods and theory for a contextual approach*. Cambridge: Cambridge University Press.
7. Childe, V. G *Piecing Together the Past*
8. Clark, J. G.D. *Archaeology and Society*
9. Clarke, D. L. 1968 *Analytical Archaeology*. Methuen: London.
10. Coles, J. M. and E.S. Higgs 1969, *The Archaeology of Early Man*. London
11. Daniel, Glynn, E. 1967 *The Origin and Growth of Archaeology*. Pelican: Harmondsworth.
12. Daniel, Glynn, E. 1975. *150 Years of Archaeology*. Duckworth: London.
13. Daniel, Glynn, E. 1980. *A Short History of Archaeology*. Thames and Hudson Ltd. London & New York.
14. Daniel, Glynn, E. and Renfrew, A.C. 1988. *The Ideas of Prehistory. (Rev. Ed.)* Edinburgh Univ. Press; Columbia Univ. Press: New York.
15. Dancy, William, S. 1985. *Archaeological Field Methods: An Introduction*. Delhi: Surjeet Publications.
16. Davidson, D.A. and M.L. Shackley (Eds) 1975, *Geo-archaeology: Earth science and the past*. London: Duckworth.
17. Evans, John, G. 1981. *An Introduction to Environmental Archaeology*. London: Paul Elek-Granada Publishing.

18. Ghilardi, M. and Desruelles, S. 2008. *Geoarchaeology: where human, social and earth sciences meet with technology*. S.A.P.I.E.N.S. 1 (2)

19. Gould, R.A.(Ed.).1978. *Explorations in Ethno-archaeology*. Albuquerque: University of New Mexico Press.

### **CE-3.3C PREHISTORIC ARCHAEOLOGY AND PALAEOANTHROPOLOGY OF AFRICA AND EUROPE**

**Full Marks: 100**

**End term: 80 /4hr**

**Mid term: 20/1hr**

#### **UNIT-I Pleistocene events and Early Human :**

Pleistocene events in the Glaciated area, Periglacial area and Pluviated area. Land and Records of Early Human in Africa and Europe.

#### **UNIT-II Prehistory of Africa (Palaeolithic Cultures):**

Lower Palaeolithic Pebble Tools Culture – evidences from Hadar, Laetoli, Olduvai Gorge, Koobi Forra;

Acheulian Culture in Africa – Evidences from Olduvai Gorge, Isimila, Kalambo Falls, Olorgesailie; Middle and Late Palaeolithic culture of North Africa.

#### **UNIT-III Prehistory of Europe (Palaeolithic Period):**

Acheulian Culture in South Western Europe – evidences from Terra Amata, Torralba Ambrona, Pech-de-l’Aze

Middle Palaeolithic Cultures in Western and Central Europe.

#### **UNIT IV Upper Palaeolithic and Mesolithic Cultures of Europe:**

Upper Palaeolithic Cultures of Western and Central; Upper Palaeolithic habitations; economy and art in Europe.

Mesolithic Cultures of Europe: Mesolithic Cultural traditions, People, Subsistence and Settlements

#### **Recommended Books:**

1. Barry, Cunliffe (Ed.) 1987. Prehistoric Europe: An Illustrated History. New York: Oxford University Press

2. Bhattacharya, D.K. Palaeolithic Europe.

3. Bhattacharya, D.K.1978. The Emergence of Culture in Europe. Delhi: B.R. Publishing Corporation

4. Champion, T., Clive Gamble, Stephen Shennan, Alasdair Whittle 1989. Prehistoric Europe. New York: Academic Press, Harcourt Brace Jovanovich, Publishers.

5. Bonsall, C. (Ed.), 1989. The Mesolithic Europe. Edinburgh

6. Grahame Clark 1977. World Prehistory: In New Perspective. Cambridge University Press

7. Clark, Grahame, World Prehistory: A New Outline: Cambridge, England: The University Press.

8. Clark, J.G.D, 1936. Mesolithic Settlement in Northern Europe. London: Cambridge
9. Clark, J.D., 1956, Prehistory of Southern Africa. New York.
10. Cole, S. 1963, Prehistory of East Africa. Pelican Books.
11. Cole, J. M. and E.S. Higgs. 1969, The Archaeology of Early Man. London.
12. Fagan, Brian M. 1977, People of the Earth: An Introduction to World Prehistory. Boston, Toronto: Little Brown and Company.
13. Lewis, B., R. Jurmain, L. Kilgore, 2007. Understanding Physical Anthropology and Archaeology. United States of America: Thomson Wordsworth.
14. Phillipson, David. W. 1990. African Archaeology. Cambridge: Cambridge University Press.
15. Potts, Richard 1988. Early Hominid Activities at Olduvai. New York: Aldine.
16. Rammi Reddy, V. 1989, Palaeolithic and Mesolithic Cultures. New Delhi: Mittal Publications.
17. Rammi Reddy, V. 1991, Neolithic and Post-Neolithic Cultures. New Delhi: Mittal Publications.
18. Wenke, Robert J. 1990. Patterns in Prehistory: Humankind's First three Million Years. (3rd Ed.). New York: Oxford University Press.
19. West, R. G. 1977. Pleistocene Geology and Biology. London and New York; Longman.
20. Wolpoff, Milford H. 1999. Palaeoanthropology. (2nd Ed.). New York: McGraw-Hill.

## CE-3.4C

### Practical

Typo-technological Analysis of Prehistoric Tools: Identification, Interpretation and Drawings of the tool Types

1. Core Tool Types
2. Flake Tool Types
3. Blade Tool Types
4. Microlithic Tool Type
5. Neolithic Tool Type

#### ***Suggested Readings :***

1. Allchin and Allchin (1993). *The Rise of Civilization of India and Pakistan*. Cambridge University Press
2. Bhattacharya D.K. (1978). *Emergence of Culture in Europe*, Delhi, B.R. Publication.
3. Bhattacharya D.K. (1979). *Old Stone Age Tools and Techniques*. Calcutta, K.P. Bagchi Company
4. Bhattacharya D.K. (1996). *Palaeolithic Europe*. Netherlands, Humanities Press.
5. Champion et al. (1984). *Prehistoric Europe*. New York, Academic Press.
6. Fagan B.M. (1983). *People of Earth: An Introduction*. Boston, Little, Brown & Company.
7. Phillipson D. W. (2005). *African Archaeology*. Cambridge, Cambridge University Press.
8. Sankalia H.D. (1964). *Stone Age Tools*. Poona Deccan College

## **SEMESTER-IV**

### **C-4.1 Forensic Anthropology**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

#### **Unit-I**

Introduction to Forensic Anthropology: Definition, Brief History, Scope, Applications and Integration of Forensic Anthropology.

#### **Unit-II**

Basic Human Skeletal Biology, Identification of Human and Non-Human Skeletal Remains, Ancestry, age, sex and stature estimation from bones, Discovery and Techniques for recovering skeletonized Human Remains.

#### **Unit-III**

Personal Identification, Complete and Partial Identification, Methods of Identification in Living Persons: Somatometry, Somatoscopy, Occupational Marks, Scars, Bite Marks, Tattoo Marks, Fingerprints, Footprints, Lip Prints, Nails, Handwriting, Deformities and Others.

#### **Unit-IV**

Serology: Identification and Individualization of bloodstain, urine, semen and saliva. Patterns of Bloodstains; Individualization: Forensic Odontology-Tooth Structure and Growth, Bite Marks, Facial Reconstruction, DNA Profiling.

#### **Suggested Readings:**

1. Bass W.M. (1971). Human Osteology: A Laboratory and Field manual of the Human Skeleton.
2. Columbia: Special Publications Missouri Archaeological Society.
3. Black S. and Ferguson E. (2011). Forensic Anthropology 2000 to 2010. CRC Press, London.
4. Byers, S. N. (2008). Forensic Anthropology. Boston: Pearson Education LTD.
5. Gunn A. (2009) Essential Forensic Biology (2nd ed). Chichester: Wiley-Blackwell
6. Modi, R. B. J. P. (2013). A Textbook of Medical Jurisprudence and Toxicology. Elsevier.
7. Reddy V. R. (1985). Dental Anthropology, Inter-India Publication, New Delhi.
8. Spencer, C. (2004). Genetic Testimony: A Guide to Forensic DNA Profiling, Pearson, New Delhi.
9. Vats Y., Dhall J.K. and Kapoor A.K. (2011). Gender Variation in Morphological Patterns of Lip Prints among some North Indian Population. J. Forensic Odontology, 4: 11-15.
10. Wilkinson, C. (2004). Forensic facial reconstruction. Cambridge University Press.

## GROUP-A

### CE-4.2A Linguistic Anthropology

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

#### **Unit-I**

Concept and Scope of Linguistic Anthropology; Linguistic Anthropology and other Behavioural Sciences; Universals of Language, Types: Descriptive and Historical Linguistic; Origin and Evolution of Language; Language, Dialect and Idiolects: Definitions and Interrelations; Socio-Linguistics.

#### **Unit-II**

Language as a System: Phonetic Sub System, Morphophonemic Sub System, Syntactic Sub System and Semantic Sub System; Language and Culture: Cultural Influence on Language and Linguistic; Influence on Culture Sapir–Whorf Hypothesis; Linguistic and Culture Change.

#### **Unit-III**

Classification of Languages: Typological and Genealogical; Functional study of Languages; India as a Linguistic Area; Standard languages and Nationalism; speech variation and the study of Indian civilization.

#### **Unit-IV**

Languages and the Analysis of Social Laws; Language and Social Structure; Structural Analysis in Linguistics and Anthropology; Language and Communication: Verbal and Non- Verbal (Signs and Symbols); Communication and Sociability; Language and Speech.

#### **Suggested Readings**

1. Ardver ,E.(ed) Social Anthropology and Language
2. Bloomfield, L. Language
3. Bright, W. Socio-linguistics
4. Burling, R. Man's Many voices-Language in its Cultural Context
5. Gleason, H.A. An Introduction to Descriptive Linguistics
6. Gumperz and The Ethnography of Communication Hymas(eds.)
7. Hockett,C.F. A Course in Modern Linguistics
8. Hoijer, H. (ed) Language in Culture
9. Hymes, D.(ed) Language in Culture and Society
10. Lehmann, H.P. Historical Linguistics
11. Levi Strauss,C. Structural Anthropology (Selected chapters)
12. Mishra, K.K. Anthropological Linguistics

## **CE-4.3A Theories and Methods in Socio-Cultural Anthropology- II**

**Full Marks: 100**  
**End term: 80 /4hr**  
**Mid term: 20/1hr**

### **Unit- I**

Structural-Functionalism - A.R. Radcliffe- Brown, Functionalism - Malinowski, Structuralism- Claude Levi-strauss

### **Unit-II**

Culture and Personality School of thought – Ruth Benedict, Margaret Mead, Linton Kardiner and Cora-du-Bois

### **Unit- III**

Symbolic and Interpretative Anthropology: Victor Turner, Schneider and Clifford Geertz

### **Unit- IV Contribution of Some World Anthropologist:**

E.R Leach, S.F Nadel, Max Gluckman

### **Suggested Readings / Books Recommended:**

1. Barth, Frederik. 1981. *Models of Social Organization*, Royal Anthropological Institute, Occasional Paper-23. London: Routledge and Kegan Paul.
2. Behura, N.K. *Anthropological thought and Theories*
3. Bidney, D. 1964. *Theoretical Anthropology*, New York: Columbia University Press,
4. ChiIde, V. Gordon. 1963. *Social Evolution*, A.A Watt and Co ltd, 1951, First Meridian printing,
5. Durkheim, E. 1938 (1895). *The Rules of the Sociological Method* (S.Solovay and J. Meuller, trans,) New York: Free Press
6. Geertz, C. 1973. *The Interpretation of Culture*, New York: Basic Books.
7. Gluckman, M. 1949. *An Analysis of the Sociological Theories of Bronislaw Malinowski*. New York and London: Oxford University Press
8. Harris, M. 1969. *The Rise of Anthropological Theory*, London: Routledge and Kegan paul.
9. Honnigman, J. J. (Ed). 1997, *A Hand Book of Social and Cultural Anthropology*, Vol-II, University of North Carolina, New Delhi: Rawat Publications.
10. Kroeber, A. L. 1953. *Anthropology Today: An Encyclopedic Inventory*. Chicago
11. Kroeber, A. L. 1939, *Cultural and Natural Areas of Native North America*, University of California Press.

12. Kuper, Adam. 1985. *Anthropology and Anthropologists: The Modern British School* (rev. ed.), Boston: Routledge & Kegan Paul.
13. Leach, E. R. 1963. *Rethinking Anthropology*, London: Athlone Press
14. Levi-Strauss, C. 1983, *Structural Anthropology*, Chicago: University of Chicago Press
15. Lowie, R. H. 1937, *The History of Ethnological Theory*, New York.
16. Malinowski, B. 1960 (Originally 1922), *A Scientific Theory of Culture and Other Essays*. New York.
17. Manners and Kaplan (Ed). 1968. *Theory in Anthropology: A Course Book*, Chicago: Aldine Publishing Company .
18. Martindale, Don. 1960, *The Nature and Types of Sociological Theory*. Houghton Mifflin.
19. Martindale, Don. 1965. *Functionalism in social Sciences. American Academy of Political & Social Science*,
20. Morgan, L. H. 1963. (Originally 1877), *Ancient Society*, New York.

#### **CE-4.4A Fieldwork and Dissertation**

**Full Marks: 100**

**Duration of Examination: 6 hours**

Empirical study among the tribes and castes of Odisha is to be conducted for a minimum periods of 30 days(1 month) in semester IV under the guidance of a teacher or teachers. Two copies of dissertation are to be submitted for examination. The Examination of Dissertation shall be conducted by an internal and an external examiner.

### **Group-B**

#### **CE-4.2B Medical genetics**

##### **Unit-I**

Medical Genetics: Meaning and Scope; History and impact of genetics in medicine; Genetic factors in Common Diseases: Gene- Disease-Environment interaction; Genetic susceptibility to Common Diseases: Diabetes, Hypertension, Coronary Heart Diseases. Single Gene Disorder and Chromosomal Disorders in Man.

##### **Unit-II**

Biochemical Genetics: Inborn Error Metabolism; Disorder of Amino Acid Metabolism. Disorder of Carbohydrate Metabolism, Disorder of Lipid Metabolism. Haemoglobin & Haemoglobinopathies: Structure of Haemoglobin, Development and expression of haemoglobin, Disorder of haemoglobin: Sickle Cell Anaemia, Thalassemia; Clinical variation of the haemoglobinopathies. Pharmacogenetics: Definition, evolutionary origin of variation in drug responses, pharmacogenomics, ecogenetics

##### **Unit-III**

Immunogenetics: Immunity, Innate and acquired immunity, Inherited immunodeficiency disorder: HLA and Disease; Blood groups. The genetics of Cancer: Differentiating between genetic and environmental factors in cancer; Oncogenes, Tumour suppressor genes, genetics of familial cancer.

##### **Unit-IV**

Application of Medical Genetics: Prenatal diagnosis & Genetic Counselling, Gene Therapy; Stem cell therapy and Bone marrow transplantation Population Screening and community genetics. Ethical, Legal & Social (ELSI) issues in Medical Genetics.

**Suggested Readings / Books Recommended:**

- Crawford, M. (Ed). 2006 Anthropological Genetics. Cambridge University Press.  
Brown, T. A. 2002. Genomes 2 Edition. Wiley-Liss, UK.  
Jobling M. A., M. E. Hurles and C. Tyler-Smith. 2004. Human Evolutionary Genetics: Origins, Peoples & Disease. Garland Science. New York.  
Sudbery, P. 2009. Human molecular genetics, 2nd Edition. Pearson (LPE).  
Cummings, M. R. 2009. Human Genetics. Cengage Learning.  
Vogel, F and Motulsky, G. 1998. Human genetics: Problems & Approaches. Springer, Berlin.  
Tamarin, R. H. 2002. Principles of Genetics. Tata Mc Graw-Hill Edition.  
Gelehrter, T.D., F. S. Collins and D. Gineburg. 1998. Principles of Medical Genetics. Williams & Wilkins, USA  
Li, Wen-Hsiung. 1997. Molecular Evolution. Sinauer Associates, Inc., Publishers, USA.  
Page, R. D. M. and E. C. Holmes. 1998. Molecular Evolution: A Phylogenetic Approach. Blackwell Science, London.  
Cavalli-Sforza, L., P. Menozzi, and A. Piazza. 1996. *The History and Geography of Human Genes*. Princeton University Press.  
Klung S. W, M. R. Cummings and C. A. Spencer. 2007. *Essentials of Genetics*, Sixth Edition. Pearson Education International.  
Muller R. F. and I. D. Young. 2001. Emery's Elements of Medical Genetics. Churchill Livingstone, London.

**CE-4.3B Human Genome: Meanings and Methods of Study**

**Unit-I**

The Human Genome: Nuclear genome and Mitochondria genome, Mapping of the Human Genome: Physical mapping and genetic mapping; Evolution of Human Genome: The origins of genome; Patterns of acquisition of New Genes, Non-coding DNA and Genome Evolution;

**Unit-II**

Molecular markers in Anthropological genetics studies (Autosomal, Y chromosome, mt DNA) Ancient DNA and its application to the reconstruction of Human Evolution Application of Molecular Genetics to Forensic Sciences and Pharmacogenomics.

**Unit-III**

The Human Diaspora: Human Origins Within and Out of Africa, Genome Diversity Studies: Indian and Odisha Populations (MtDNA, Y-Chromosome, Alu, STR).

**Unit-IV**

Evolutionary Anthropology: meaning and scope. Molecular phylogenetics: methods and examples; Role of mutation and selection in molecular evolution; evolution by transposition and horizontal transfer, Genome organization and evolution.

**Suggested Readings / Books Recommended:**

- Crawford, M. (Ed). 2006 Anthropological Genetics. Cambridge University Press.  
Brown, T. A. 2002. Genomes 2 Edition. Wiley-Liss, UK.

Jobling M. A., M. E. Hurles and C. Tyler-Smith. 2004. Human Evolutionary Genetics: Origins, Peoples & Disease. Garland Science. New York.

Sudbery, P. 2009. Human molecular genetics, 2<sup>nd</sup> Edition. Pearson (LPE).

Cummings, M. R. 2009. Human Genetics. Cengage Learning.

Gardener, A.; R. T. Howell and T. Davies. 2008. Human Genetics. Viva Books Private Limited, New Delhi.

Vogel, F and Motulsky, G. 1998. Human genetics: Problems & Approaches. Springer, Berlin.

Tamarin, R. H. 2002. Principles of Genetics. Tata Mc Graw-Hill Edition.

Gelehrter, T. D., F. S. Collins and D. Gineburg. 1998. Principles of Medical Genetics. Williams & Wilkins, USA

Li, Wen-Hsiung. 1997. Molecular Evolution. Sinauer Associates, Inc., Publishers, USA.

Page, R. D. M. and E. C. Holmes. 1998. Molecular Evolution: A Phylogenetic Approach. Blackwell Science, London.

Cavalli-Sforza, L., P. Menozzi, and A. Piazza. 1996. The History and Geography of Human Genes. Princeton University Press.

Li Wen-Hsiung. 1997. Molecular Evolution. Sinauer Associates, Inc., Publishers, USA.

Page R.D.M. and E.C. Holmes. 1998. Molecular Evolution – a phylogenetic approach. Blackwell Science Ltd., USA.

#### **CE-4.4B Fieldwork and Dissertation**

**Full Marks: 100**

**Duration of Examination: 6 hours**

Empirical study among the tribes and castes of Odisha is to be conducted for a minimum period of 30 days (1 month) in semester IV under the guidance of a teacher or teachers. Two copies of dissertation are to be submitted for examination. The Examination of Dissertation shall be conducted by an internal and an external examiner.

### **Group-C**

#### **CE-4.2C FIELD TECHNIQUES AND METHODS IN PREHISTORIC ARCHAEOLOGY**

##### **Unit-I** Typology and Technology in Prehistoric Archaeology:

Understanding Typology and Functions Prehistoric Artifacts and Tools: Terms of specificities in artifact analysis (artifacts, tools, industry, association, assemblage, aggregate, attribute type and typology); Types of Artifacts--Core, Flake, Blades ; Tool Typology-- Pebble tools, Bifaces, Blade Tools, Borer/Awl, Burin, Points, Denticulate, Notch; Microliths (Geometric types, Non-geometric types); Ground and polished tools;

Prehistoric Technology: Manufacturing techniques of Prehistoric tools (lithic, bone and antler/horn); Experimental Archaeology: Lithic Use-Wear Analysis.

##### **Unit-II** Methods of Dating in Archaeology:

Relative Dating Methods: Stratigraphy, Typological sequence, Palynology, Varve Analysis;

Absolute Dating Method: Radio Carbon Dating, Potassium-Argon Method, Thermo luminescence Dating, Fission Track Dating;

Calibrated Relative Dating Methods: Obsidian Hydration, Amino-Acid Racemization, Cation ratio dating, Archaeomagnetic Dating.

**Unit-III** Field Methods in Archaeology:

Exploration: Purpose, Classes and surveying equipments; Methods of exploration – Researching Maps, Ground Reconnaissance; Aerial Reconnaissance; Geophysical Prospecting Methods.

Excavation : Meaning and objectives; Instruments used in excavation; Methods of Excavation – Trial Trenching or Sondages, Vertical Excavation, Horizontal Excavation; Excavation of Rock shelter and caves.

**Unit-IV** Specialized Field Methods in Archaeological Research:

Emergence of Computer Application in Archaeology (i) Application of Remote Sensing in Archaeology; (ii) Application of Geographic Information System for spatial analysis and archaeological resource management.

**Suggested Readings / Books Recommended:**

1. Agarwal, D. P. and M.G. Yadav 1995. Dating the human Past. Indian Society for Prehistoric Studies, Pune: Deccan College.
2. Allen, K.M.S., S.W. Green and E.B.W. Zubrow (Eds). 1990. Interpreting Space: GIS and Archaeology New York: Taylor and Francis.
3. Alexander, John, 1970, The Directing of Archaeological Excavation. London: John Baker.
4. Atkinson, R.J.C. 1953, Field Archaeology (2nd ed.) Methuen, London.
5. Barker, Philip 1993, Techniques in Archaeological Excavation. London: Bastford.
6. Borthwell, Don R. 1977, Digging up Bones: The Excavation Treatment and Study of Human Skeletal Remains (2nd ed) London: British Book Centre.
7. Burkitt, M.C. 1985. The Old Stone Age A Study of Palaeolithic Times. New Delhi: Rupa & Co.
8. Conolly, J. and Lake, M. 2006. Geographical Information Systems in archaeology. Cambridge: Cambridge University Press.
9. Cornwall, I.W. 1958, Soils for the Archaeologist, London: Phoenix House.
10. Colwell, R.N. (ed.), 1983. Manual of Remote Sensing (2 volumes). American Society of Photogrammetry, Falls Church Virginia.
11. Cox, C. 1992, Satellite Imagery, Aerial Photography and Wetland Archaeology, World Archaeology 24:249-367.
12. Dancey, William S. 1985, Archaeological Field Methods: An Introduction. Delhi: Surjeet Publication
13. Deo, S. G. and P.P. Joglekar, 1996-1977, Geographic Information System (GIS) for Archaeology (In Puratattva-27,)
14. Deo, S.G. and P.P. Joglekar, 1994. Satellite Remote Sensing in Archaeology (In Man and Environment XIX (1-2) ISPQS, Pune: Deccan College.
15. Harris, Edward 1989 Principles of Archaeological Stratigraphy (2nd Ed.) New York: Academic Press.

## **CE-4.3C PREHISTORY AND PROTOHISTORY OF EASTERN INDIA AND SOUTH EAST ASIA**

### **Unit-I** Prehistory of Eastern India: An Ecological perspective of Stone Age

Palaeolithic Cultures of Eastern India (with special reference to Bihar, Bengal and North Eastern Regions)

Mesolithic Neolithic Culture of Eastern India (with special reference to Bihar, Bengal and North Eastern Regions)

### **Unit-II** Prehistoric Archaeology of Odisha and Protohistory of Eastern India:

Prehistoric Archaeology of Odisha: (i) Palaeolithic (Lower, Middle, Upper) Cultures, (ii) Mesolithic Culture and Neolithic Culture.

Protohistoric Archaeology of Eastern India: Metal Age Cultures (Chalcolithic and Iron Age phases) of Odisha, Bihar, Bengal and Northeast.

### **Unit-III** Pleistocene and Holocene Events in Southeast Asia:

Pleistocene Events : Land and Records of Early Human in South East Asia; Pleistocene Epoch in Southeast Asia; Stone tool Industries of the Middle Pleistocene and Upper Pleistocene periods.

Holocene Events in Southeast Asia:

Early Holocene Stone tool industry – the Hoabinhian Techno-complex of the Southeast Asian main land.

**Unit-IV** Neolithic and Early Metal Age in Southeast Asia: Neolithic Cultures on the Southeast Asia Mainland and Island. Early Metal Age Cultures on the Southeast Asia Mainland and Island.

### **Suggested Readings / Books Recommended:**

1. Agarwal, D.P. 1984, Archaeology of India. New Delhi: Select Book Services Syndicate.
2. Agrawal, D.P. 1971. The Copper-Bronze in India. New Delhi.
3. Agrawal, D.P. and Chakrabarti D.K. (Eds.) (1979). Essays in Indian Protohistory. Delhi: B. R. Publishing Corporation.
4. Allchin, Briget and Raymond Allchin 1982. The Rise of Civilization in India and Pakistan. Cambridge: Cambridge University Press.
5. Banerjee, N. R. 1965. The Iron Age in India. Delhi.
6. Basa, K. K. 1994, Problems and Perspectives in Archaeology of Orissa, India. Occasional Paper 4, DSA- Anthropology, Utkal University, Bhubaneswar.
7. Basa, K.K. & P. Mohanty (Eds) 2000, Archaeology of Orissa. New Delhi: Pratibha Prakashan.
8. Bellwood, P.S. 2007. Prehistory of Indo-Malaysian Archipelago. Australian National University Press.
9. Bhattacharya, D. K. 2001. An Outline of Indian Prehistory. Delhi: Palaka Prakashan.

10. Bhattacharya, M. 1999. Prehistory of West Bengal. Calcutta: Action Research Institute.
11. Bose, N. K. & D. Sen, 1948, Excavations in Mayurbhanj: Calcutta University.
12. Chakrabarti D.K. 1992. The Early Use of Iron in India. Delhi: Oxford University Press.
13. Chakrabarti D.K. 1993. Archaeology of Eastern India: Chhotanagpur Plateau and West Bengal. Delhi: Munshiram Manoharlal Publishers Private Limited.
14. Chakrabarti D.K. 1999. India: An Archaeological History: Palaeolithic Beginnings to Early Historic Foundations. Delhi: Oxford University Press.
15. Clark, Grahame. 1969. World Prehistory: A New Outline. Cambridge University Press.
16. Dennell, Robin 2009. The Palaeolithic Settlement of Asia. Cambridge: Cambridge University press.
17. Dikshit, K. N. (Ed.), 1985, Archaeological Prospective of India since Independence. New Delhi.
18. Higham, C. 1991. Archaeology of Mainland South East Asia: From 10,000 BC to the Fall of Angkor. Cambridge: Cambridge University Press.
19. Jain, V. K. 2009. Prehistory and Protohistory of Indian. New Delhi: D.K. Printworld (P) Ltd.
20. Narayan, B. 1999. Emerging Issues of Prehistory in Bihar. Kolkata: Centre for Archaeological Studies and Training, Eastern India.

#### **CE-4.4 C FIELDWORK AND DISSERTATION**

**Full Marks: 100**

**Duration of Examination: 6 hours**

Each student is required to submit a dissertation based on at least 30 days fieldwork on topics relating to archaeological exploration and/or excavation of Prehistoric or Protohistory sites, ethnoarchaeology, and ethno-technology of ethnic groups: tribal or rural community under the guidance of the concerned teacher or teachers. The concerned teacher will finalize the field site in consultation with the Head of the Department. The Examination on Dissertation shall be conducted by an internal and an external examiner.