

# **COURSES OF STUDIES**

FOR

THREE YEAR DEGREE COURSE

IN

**ARTS HONOURS**

**GEOGRAPHY HONS**

**Choice Based Credit System(CBCS)**

First & Second Semester Examination – 2019-20

Third & Fourth Semester Examination – 2020-21

Fifth & Sixth Semester Examination – 2021-22



**GOVERNMENT AUTONOMOUS COLLEGE,  
PHULBANI, KANDHAMAL**

*Govt. Autonomous College, Phulbari*

**SYLLABI FOR CBCS COURSE**

Sem	CORE COURSE (14)	Ability Enhancement Compulsory Course (AECC) (2)	Ability Enhancement Elective Course (AEEC) (2) (Skill Based)	Elective: Discipline Specific DSE (4)	Elective: Generic (GE) (4)
I	CORE-I	AECC-I			GE-IA
	CORE-II				
II	CORE-III	AECC-II			GE-1B
	CORE-IV				
III	CORE-V		SEC-I		GE-2A
	CORE-VI				
	CORE-VII				
IV	CORE-VIII		SEC-II		GE-2B
	CORE-IX				
	CORE-X				
V	CORE-XI			DSE-I	
	CORE-XII			DSE-II	
VI	CORE-XIII			DSE-III	
	CORE-XIV			DSE-IV / Project	

## YEAR & SEMESTER-WISE PAPERS & CREDITS AT A GLANCE

Three-Year (6-Semester) CBCS Programme (B.A. Hons) (Geography Hons.)				
Yr.	Sl.No.	Course Structure	Code	Credit Points
<b>FIRST YEAR</b>	<b>SEMESTER-I</b>			
	1	Geomorphology	C-1.1	4+2
	2	Cartography	C-1.2	4+2
	3	Anthropology/English/History/Political Science	GE-1.3	6
	4	MIL Communication – Odia / MIL (AE)	AECC-1.4	6
	<b>SEMESTER-II</b>			
	5	Human Geography	C-2.1	4+2
	6	Climatology	C-2.2	4+2
<b>SECOND YEAR</b>	<b>SEMESTER-III</b>			
	9	Oceanography	C-3.1	4+2
	10	Statistical Methods in Geography	C-3.2	4+2
	11	Geography of Odisha	C-3.3	4+2
	12	Anthropology/English/History/Political Science	GE-3.4	6
	13	Communicative English	SECC-I-3.5	6
	<b>SEMESTER-IV</b>			
	14	Evolution of Geographical Thought	C-4.1	4+2
	15	Economic Geography	C-4.2	4+2
	16	Environmental Geography	C-4.3	4+2
<b>FINAL YEAR</b>	<b>SEMESTER-V</b>			
	19	Regional Planning and Development	C-5.1	4+2
	20	Remote Sensing & GIS	C-5.2	4+2
	21	Population Geography	DSE-5.3	4+2
	22	Resource Geography	DSE-5.4	4+2
	<b>SEMESTER-VI</b>			
	23	Geography of India	C-6.1	4+2
	24	Disaster Management	C-6.2	4+2
25	Urban Geography	DSE-6.3	4+2	
26	Project Work / Field Work and Research Methodology	DSE-6.4	6 / 4+2	

**Notes:**

- C- Core Course
- GE- Generic Elective Course
- DSE- Discipline Specific Elective Course
- AECC- Ability Enhancement Compulsory Course
- SECC- Skill Enhancement Compulsory Course
- For a 6 credit course, the total teaching hours are: Minimum- 50 Hours, Maximum-65 Hours

## SEMESTER-I

### C-1.1 : GEOMORPHOLOGY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

#### THEORY

##### UNIT - I:

Geomorphology: Meaning, Nature & Scope, Internal Structure of the Earth, Isostasy (Airy and Pratt's view), Rocks-Types and Characteristics, Types of Folds and Faults

##### UNIT - II:

Earth Movements: Continental Drift, Plate Tectonics, Types of Folds and Faults, Earthquakes and Volcanoes (Types, distribution and associated Landforms). Geosynclinal theory and stages of mountain building and Convection current theory

##### UNIT - III:

Geomorphic Processes: Types & characteristics of Weathering & Mass Wasting, Cycle of Erosion & evolution of Landforms of Davis and Penck's evolutionary theory)

##### UNIT - IV:

Geomorphic agents and landforms: (Erosional and Depositional landforms of Fluvial, Karst, Aeolian, Glacial and Coastal origin)

#### PRACTICAL

1. Drawing of relief features using contour lines-Mountain, Plateau, valleys, escarpments and their profiles, construction and use of serial, projected and super-imposed profiles,
2. Use of Planimeter and Rotameter in measurements on maps, Longitudinal and transverse profile of a river, Drainage Pattern and drainage Density
3. Interpretation of simple geological Maps (Introducing the concepts of Dip, Strike, Bedding Plane, Unconformity, Dykes, Folds and Faults).
4. Practical Record and Viva-voce (10 marks)

##### Text Books:

1. Singh, S (2009): Physical Geography , Geomorphology, Prayag Pustak Publications, Allahabad

##### Reading Lists:

- ❖ Bloom A. L., 2003: Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, New Delhi.
- ❖ Bridges E. M., 1990: World Geomorphology, Cambridge University Press, Cambridge.
- ❖ Christopherson, Robert W., (2011), Geosystems: An Introduction to Physical Geography, 8 Ed., Macmillan Publishing Company
- ❖ Kale V. S. and Gupta A., 2001: Introduction to Geomorphology, Orient Longman, Hyderabad.
- ❖ Knighton A. D., 1984: Fluvial Forms and Processes, Edward Arnold Publishers, London.
- ❖ Richards K. S., 1982: Rivers: Form and Processes in Alluvial Channels, Methuen, London.
- ❖ Selby, M.J., (2005), Earth's Changing Surface, Indian Edition, OUP
- ❖ Skinner, Brian J. and Stephen C. Porter (2000), The Dynamic Earth: An Introduction to physical Geology, 4th Edition, John Wiley and Sons
- ❖ Thornbury W. D., 1968: Principles of Geomorphology, Wiley.
- ❖ Gautam, A (2010): Bhautik Bhugol, Rastogi Publications, Meerut
- ❖ Tikkaa, R N (1989): Bhautik Bhugol ka Swaroop, Kedarnath Ram Nath, Meerut
- ❖ Singh, S (2009): Geomorphology, Prayag Pustak Bhawan, Allahabad.
- ❖ Steers, J. A. – Unstable Earth, Kalyani Publisher.

## C-1.2 : CARTOGRAPHY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

### THEORY

#### UNIT - I: Cartography-Nature and scope

- i. Scientific basis of Cartography, needs of map making, characteristics of maps,
- ii. Cartography as a science of human communication
- iii. Branches of Cartography, Scope of cartography

#### UNIT - II: Basic Geodesy, Scale – Concept and application

- i. Spherical Earth, Ellipsoidal Earth. Geoid Earth
- ii. Geographical Coordinates (Latitude and Longitude), Graticules
- iii. Scale, Construction of types of Scales (Plain, Comparative and Diagonal Scale)

#### UNIT - III: Map Projections

- i. Meaning and Use, Brief Historical aspect.
- ii. Transformation of area, Distance and Direction
- iii. Simple Cylindrical Projection, Conical Projection with one standard projection

#### UNIT - IV: Slope Analysis and Geological Map Gradient and slope

- i. Interpretation of Bedding plane, Strike, Dip, structure & stratigraphy of Geological map.
- ii. Slope defined and methods of determination of slope (Wentworth's method and Smith)

### PRACTICAL

1. Construction and use of Graphical, RF & Statement Scale, Diagonal Scale
2. Grid Reference System, Latitude, Longitude, International Date Line, Date and Time based on GMT & IST)
3. Construction of Map Projections: Simple Cylindrical, Simple conical Projection with one and two standard parallels, Polyconic, Gnomonic and Mercator's
4. Cartograms of one, two and three dimensions–Simple and Complex bars, circle and sphere diagram, block diagrams.
5. Drawing of Choropleth and isopleths maps, relief and slope maps
6. Practical record and viva-voce

#### Text Books:

1. Singh R. L. and Singh R. P. B., 1999: Elements of Practical Geography, Kalyani Publishers.
2. Mishra R.P. and Ramesh, A., 1989: Fundamentals of Cartography, Concept, New Delhi.

#### Reference Books:

- ❖ Anson R. and Ormelling F. J., 1994: International Cartographic Association: Basic Cartographic Vol. Pregmen Press.
- ❖ Monkhouse F. J. and Wilkinson H. R., 1973: Maps and Diagrams, Methuen, London.
- ❖ Robinson A. H., 2009: Elements of Cartography, John Wiley and Sons, New York.
- ❖ Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi.

## GE-1.3 : INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

### THEORY

#### UNIT - I :

History of Physical Anthropology and development of Modern Biological anthropology, aim, scope and its relationship with allied disciplines; Difference in the approaches of modern and traditional Biological Anthropology

#### UNIT - II :

History and development of understanding human evolution (pre-19th and post-19<sup>th</sup> Century); Theories of evolution: Lamarckism, Darwinism, Synthetic theory, and Mutation theory

#### UNIT - III :

Primates: General Characteristics, Distribution and Classification of Non human living primates. Comparative anatomy and behaviour of human and non-human primates

**UNIT - IV :**

Structure and function of an animal cell; cell theory and cell division (Mitosis and Meiosis), Mendel's Laws of inheritance and its application to man

**PRACTICAL**

**Osteology**

Introduction to Anthropology Laboratory: Dry Lab and Wet Lab, Calibration and Standardization of Instruments, Demonstration of Instruments: Anthropometry, Spreading Calliper, Sliding Calliper, Weighing Machine and Steel tape

**Somatometry**

- |                         |                                |
|-------------------------|--------------------------------|
| 1. Stature              | 6. Maximum bizygomatic breadth |
| 2. Sitting height       | 7. Bigonial breadth            |
| 3. Body weight          | 8. Morphological facial height |
| 4. Maximum head length  | 9. Head circumference          |
| 5. Maximum head breadth | 10. Minimum frontal breadth    |

**Text book recommended :**

1. Shukla B.R.K. & Rastogi, S. 1990. *Physical Anthropology & Human Genetics: An Introduction*. Plaka Prakashan. Delhi.
2. Das B.M. 2008. *Outlines of Physical Anthropology*. Kitab Mahal, New Delhi.
3. Sarkar, R. M. 2004. *Fundamentals of Physical Anthropology* (New Edition).Book World. Kolkata.
4. Mukherji, D., D. Mukherjee and P. Bharti and A. Mukhopadhyaya. 2018. *Laboratory Manual for Biological Anthropology: Revised and Enlarged 2nd Edition*. SCHOLAR Booksellers & Publishers, Kolkata.

**Suggested Readings :**

- ❖ Jurmain R., Kilgore L., Trevathan W., Ciochon R.L. (2012). *Introduction to Physical Anthropology* Wadsworth Publ., USA.
- ❖ Stanford C., Allen J.S. and Anton S.C. (2010). *Exploring Biological Anthropology. The Essentials*. Prentice Hall Publ, USA.

**GE-1.3 : ACADEMIC WRITING AND COMPOSITION**

**Full Marks – 100**  
**Mid Sem – 20/1hr**  
**End Sem – 80/3 hrs**

**Introduction:**

*This paper seeks to train the students in the basic writing skills required for writing competently in the academic context.*

**UNIT - I:**

Introduction to the Writing Process: with a focus on Academic Writing

**UNIT - II:**

Writing in one's own words: Summarizing and Paraphrasing

**UNIT - III:**

Thinking: Synthesis, Analysis, And Evaluation

**UNIT - IV:**

Citing Resources: Editing, Book and Media Review

**Reference Books:**

- ❖ Liz Hamp-Lyons and Ben Heasley, *Study Writing: A Course in Writing Skills for Academic Purposes* (Cambridge UP, 2006)
- ❖ Ilona Leki, *Academic Writing: Exploring Processes and Strategies*. New York: CUP, 2nd edn, 1998
- ❖ Stanley Fish, *How to Write a Sentence and How to Read One*. Harpar Perennial. 2011.
- ❖ *Literature and the art of Communication*, Cambridge University Press
- ❖ Gerald Graff and Cathy Birkenstein, *They Say/I Say: The Moves That Matter in Academic Writing*. New York: Norton, 2009

## GE-1.3 : HISTORY OF INDIA – I (EARLY TIME TO 1750)

Full Marks – 100  
Mid Sem – 20/1hr  
End Sem – 80/3 hrs

### UNIT – I: Reconstructing Ancient Indian History

1. Sources of Historical Writings.
2. Vedic Age : Society, Polity and Culture
3. Buddhism and Jainism : Principles and Impact

### UNIT – II: Polity and Administration

1. The Mauryan Empire : Conquest and Administration
2. Gupta Society : Land Grants, Peasantry and beginning of Feudal Society
3. Gupta Polity : Conquests and Administration
4. Harshavardhan : Achievements

### UNIT – III: Early Medieval Society, Economy and Culture

1. Post Gupta Trade and Commerce
2. Delhi Sultanate : Conquests and Administration
3. Bhakti and Sufi Movements in India
4. Development of Regional Language and Literature

### UNIT – IV: India on the Eve of the Advent of the Mughals

1. Sher Shah : Administration and Reforms
2. Mughal Administrative Institutions : Zabt, Mansab and Jagir
3. Religious Tolerance Sulh-i- Kul
4. Mughal Art and Architecture

#### Suggested Text Books:

1. Upinder Singh, History of Ancient & Early Medieval India.
2. Romila Thappar, The Early India

#### Reference Reading:

- ❖ Irfan Habib, Medieval India, NBT, New Delhi
- ❖ R.S. Sharma, India's Ancient Past
- ❖ S.A.A. Rizvi, Wonder that was India, Vol.II, Rupa
- ❖ Cultural Heritage of India, Bharatiya Vidyabhaban Series, Vol-1-IV
- ❖ A.L. Basheon (ed), Cultural History of India, OUP, New Delhi, 2011

## GE-1.3 : FEMINISM: THEORY AND PRACTICE

Full Marks – 100  
Mid Sem – 20/1hr  
End Sem – 80/3 hrs

**Introduction:** The aim of the course is to introduce students to contemporary debates on feminism and the history of feminist struggles. The course begins with a discussion on construction of gender and an understanding of complexity of patriarchy and goes on to analyze theoretical debates within feminism. It offers a gendered analysis of Indian society, economy and polity with a view to understanding the structures of gender inequalities. And the last section aims to understand the issues with which contemporary Indian women's movements are engaged with.

### UNIT-I: Understanding Feminism

- (i) Feminist theorizing of the sex/gender distinction; Public Man and Private Woman
- (ii) Understanding Patriarchy and Feminism

### UNIT-II: Theories of Feminism

- (i) Liberal and Socialist,
- (ii) Radical feminism and Eco-feminism

### UNIT-III: Feminist issues and women's participation: The Indian Experience

- (i) Women's participation in anti-colonial and national liberation movements with special focus on India
- (ii) Traditional Historiography and Feminist critiques; Social Reforms Movement and position of women in India, History of Women's struggle in Post- Independent India

### UNIT-IV: Family in contemporary India and Understanding Woman's Work and Labour

- (i) Family in contemporary India - patrilineal and matrilineal practices. Gender Relations in the Family, Patterns of Consumption: Intra Household Divisions, entitlements and bargaining, Property Rights
- (ii) Understanding Woman's Work and Labour – Sexual Division of Labour, Productive and Reproductive labour, Visible - invisible work – Unpaid (reproductive and care), Underpaid and Paid work,- Methods of computing women's work , Female headed households



**Text Books :**

1. Bina Agarwal, (2013) 'Gender And Green Governance', Oxford University Press, Oxford,
2. Forbes, Geraldine (1998) 'Women in Modern India'. Cambridge, Cambridge University Press
3. Geetha, V. (2002) 'Gender'. Calcutta, Stree Publications.
4. Geetha, V. (2007) 'Patriarchy'. Calcutta, Stree Publications.
5. Jagger, Alison. (1983) 'Feminist Politics and Human Nature'. U.K, Harvester Press.
6. John, Mary(2008) 'Women studies in India: A Reader', Peguin, New Delhi
7. Lerner, Gerda. (1986) 'Creation of Patriarchy'. New York. Oxford University Press.

**Reference Books :**

- ❖ Banarjee, Sikata. (2007) 'Ghadially, Rehana. (ed.) 'Urban Women in Contemporary India: A Reader'. New Delhi, Sage.
- ❖ Chakravarti, Uma. (1988) 'Beyond the Altekarian Paradigm: Towards a New Understanding of Gender Relations in Early Indian History', Social Scientist, Volume 16, No. 8.
- ❖ Desai, Neera & Thakkar, Usha. (2001) 'Women in Indian Society'. New Delhi: National Book Trust.
- ❖ Gandhi, Nandita & Shah, Nandita. (1991) 'Contemporary Women's Movement in India'. Delhi, Zubaan.
- ❖ Gupta, A and Sinha Smita, (2005) 'Empowerment of women: Language and Other Facets', Mangal Deep, New Delhi.
- ❖ Jayawardene, Kumari. (1986) 'Feminism and Nationalism in the Third World'. London, Zed Books and Conclusion.
- ❖ Nayak, Smita (2016) (eds.) 'Combating Violence Against Women: A Reality in the Making', Kalpaz, Gyan Books Pvt, Ltd, New Delhi
- ❖ Nayak, Smita (2016) (eds.) 'Gender Dynamics: The Emerging Frontiers', Research India Publications, New Delhi.
- ❖ Nayak, Smita, (2016), 'Whither Women: A Shift from Endowment to Empowerment', Edupedia, New Delhi.
- ❖ Rege, Sharmila. (2003) (ed.) 'The Sociology of Gender: The Challenge of Feminist Sociological Knowledge'. New Delhi, Sage.
- ❖ Rowbotham, Shiela. (1993) 'Women in Movements', New York and London, Routledge.
- ❖ Sangari, Kumkum & Chakravarty, Uma.(1999) (eds.) 'From Myths to Markets: Essays on Gender'. Delhi, Manohar.
- ❖ Sarkar, Tanika & Butalia, Urvashi. (1995) (eds.) 'Women and the Hindu Right'. Delhi, Kali for Women.

**AECC – 1.4 : MIL COMMUNICATIONS – ODIA**  
(ଯୋଗାଯୋଗ ଅନୁବିଧି, ରୀତି ଓ ମାଧ୍ୟମ)

**Full Marks – 100**  
**Mid Sem – 20/1hr**  
**End Sem – 80/3 hrs**

୧ମ ଏକକ / ଯୁନିଟ୍ – ୧ :

ଯୋଗାଯୋଗର ପରିଭାଷା, ଅନୁବିଧି, ପରିସର ଓ ପ୍ରକାରଭେଦ

୨ୟ ଏକକ / ଯୁନିଟ୍ – ୨ :

ସାକ୍ଷାତକାର, ଭାଷଣ କଳା

୩ୟ ଏକକ / ଯୁନିଟ୍ – ୩ :

ସମ୍ବାଦର ପରିଭାଷା, ପରିସର ଓ ସମ୍ବାଦ ପ୍ରସ୍ତୁତି

୪ର୍ଥ ଏକକ / ଯୁନିଟ୍ – ୪ :

ଓଡ଼ିଆ ଭାଷାର ବର୍ଣ୍ଣମାଳା, ବର୍ଣ୍ଣାଶୁଦ୍ଧିର ନିରାକରଣ । (ବନାନ ତୁଟି – ସାଦୃଶ୍ୟଜନିତ ଅଶୁଦ୍ଧି, ଲିଙ୍ଗଗତ ଅଶୁଦ୍ଧି, ସନ୍ଧିଗତ ଅଶୁଦ୍ଧି, ସମାସଗତ ଅଶୁଦ୍ଧି, ବଚନ ଓ ବିଭକ୍ତିଗତ ଅଶୁଦ୍ଧି, ବାକ୍ୟ ବିଧିଜନିତ ଅଶୁଦ୍ଧି, ସମାର୍ଥବୋଧକ ଶବ୍ଦାଶୁଦ୍ଧି, ପ୍ରତ୍ୟୟ ଜନିତ ଅଶୁଦ୍ଧି, ଶବ୍ଦ ସଂଯୋଗାତ୍ମକ ଓ ସ୍ଵରସଙ୍ଗତି ଜନିତ ଅଶୁଦ୍ଧି)

**ସହାୟକ ଗ୍ରନ୍ଥସୂଚୀ :**

୧. ଯୋଗାଯୋଗ ମୂଳକ ମାତୃଭାଷା (ଓଡ଼ିଆ) – ସାମଲ ବିରଞ୍ଚି ନାରାୟଣ, ସତ୍ୟନାରାୟଣ ବୁକ ୱୋର, କଟକ

୨. ସଂଯୋଗ ଅନୁବିଧି - ସନ୍ତୋଷ କୁମାର ତ୍ରିପାଠୀ, ନୀଳମା, କଟକ
୩. ଭାଷଣ କଳା ଓ ଅନ୍ୟାନ୍ୟ ପ୍ରସଙ୍ଗ - କୃଷ୍ଣଚନ୍ଦ୍ର ପ୍ରଧାନ, ସତ୍ୟନାରାୟଣ ବୁକ୍ ଷୋର, କଟକ
୪. ପ୍ରାୟୋଗିକ ଓଡ଼ିଆ ଭାଷା - ଓଡ଼ିଶା ରାଜ୍ୟପାଠ୍ୟ ପୁସ୍ତକ ପ୍ରଣୟନ ଓ ପ୍ରକାଶନ ସଂସ୍ଥା, ଭୁବନେଶ୍ୱର
୫. ସମ୍ପାଦ ଓ ସାମ୍ପାଦିକତା - ଚନ୍ଦ୍ରଶେଖର ମହାପାତ୍ର, ଓଡ଼ିଶା ରାଜ୍ୟ ପାଠ୍ୟପୁସ୍ତକ ପ୍ରଣୟନ ଓ ପ୍ରକାଶନ ସଂସ୍ଥା, ଭୁବନେଶ୍ୱର
୬. ନିର୍ଭୁଲ ଲେଖାର ମୂଳସୂତ୍ର - ନୀଳାଦିଭୂଷଣ ହରିଚନ୍ଦନ, ପି.ସି.ଆର ପବ୍ଲିକେସନ, ଭୁବନେଶ୍ୱର
୭. ସର୍ବସାର ବ୍ୟାକରଣ - ନାରାୟଣ ମହାପାତ୍ର ଓ ଶ୍ରୀଧର ଦାସ, ନିୟୁ ଷ୍ଟୁଡେଣ୍ଟସ୍ ଷୋର, କଟକ

**ମୂଳ୍ୟ ବିଭାଜନ ପଦ୍ଧତି : (ସବୁଥିରୁ ବିକଳ ପଡ଼ିବ)**

- (କ) ପତ୍ର ମୋଟ ନମ୍ବର - ୧୦୦
- (ଖ) ଅନ୍ତଃପରୀକ୍ଷା - ୨୦ ଓ ମୁଖ୍ୟ ପରୀକ୍ଷା - ୮୦
- (ଗ) ନିର୍ଦ୍ଧାରିତ ପାଠ୍ୟର ସବୁ ଏକକ(ୟୁନିଟ)ରୁ ବିକଳସହ ଦୁଇଟି ଲେଖାଏଁ ମୋଟ ୮ଟି ୧୫ନମ୍ବର ବିଶିଷ୍ଟ ଦୀର୍ଘ ପ୍ରଶ୍ନ ପଡ଼ିବ । ବିଦ୍ୟାର୍ଥୀଙ୍କୁ ୪ଟି ପ୍ରଶ୍ନର ଉତ୍ତର ଦେବାକୁ ହେବ । (୧୫ x ୪ = ୬୦)
- (ଘ) ନିର୍ଦ୍ଧାରିତ ପାଠ୍ୟର ସବୁ ଏକକରୁ ୧୨ଟି ଅତିସଂକ୍ଷିପ୍ତ ପ୍ରଶ୍ନ ପଡ଼ିବ । ସେଥିରୁ ୧୦ଟି ପ୍ରଶ୍ନର ଉତ୍ତର ଦେବାକୁ ହେବ । (୧୦ x ୨ = ୨୦)

**AECC-1.4 : MIL (ALTERNATIVE ENGLISH)**

**Full Marks – 100  
Mid Sem – 20/1hr  
End Sem – 80/3 hrs**

**Introduction:**

The paper is focused upon developing one fundamental skills of Language learning; reading which needs a thorough rethink and revision. In order to build a strong base for acquisition of the communication skills, suitable reading content is selected from diverse areas in prose form. This would boost the learner's competence in expressive and comprehension skills. The well researched language exercises in the form of usage, vocabulary and grammar is the other area that should attract the teacher and learner to work out for giving decent shape to the mastery of English language.

**UNIT - I: Short Story**

- a. Jim Corbett-The Fight between Leopards
- b. Dash Benhur- The Bicycle
- c. Dinanath Pathy- George V High School
- d. Alexander Baron- The Man who knew too much
- e. Will F Jenkins- Uneasy Homecoming

**UNIT - II: Prose**

- a. Mahatma Gandhi- The way to Equal Distribution
- b. S Radhakrishnan- A Call to Youth
- c. C V Raman-Water- The Elixir of Life
- d. Harold Nicolson- An Educated Person
- e. Claire Needell Hollander- No Learning without Feeling

**UNIT - III:**

Comprehension of a passage and answering the questions

**UNIT - IV:**

Language exercises-test of vocabulary, usage and grammar

**Text Books:**

1. All Stories and Prose pieces

**Reference Books:**

- ❖ *The Widening Arc: A Selection of Prose and Stories*, Ed. A R Parhi, S Deepika, P Jani, Kitab Bhavan, Bhubaneswar.
- ❖ *A Communicative Grammar of English*, Geoffrey Leech.
- ❖ *A University Grammar of English*, Randolph Quirk and Sidney Greenbaum
- ❖ *Developing Reading Skills*. F. Grellet. Cambridge: Cambridge University Press, 1981.

## SEMESTER-II

### C-2.1 : HUMAN GEOGRAPHY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

#### THEORY

**UNIT - I:**

Introduction: Defining Human Geography: Nature, scope and Contemporary Relevance, Man-nature Relationship: Major racial groups and their characteristics

**UNIT - II:**

World distribution of major racial groups, language and religion, Cultural realms of the world

**UNIT - III:**

Demographic Characteristics of population: Population Composition (Male & Female, Sex Ratio, Age and Sex, Occupational Structure, Population Density), Factor affecting population distribution, Trend of World Population Growth, Demographic Transition Theory, Population Problems in developed and under developed world.

**UNIT - IV:**

Settlements: Types and pattern of Rural and urban Settlements; concept of urban area, towns and cities, Size Class and Functional Classification of towns and Trend of Urbanization of the world

#### PRACTICAL

1. Drawing of age sex pyramid of developed, developing and under developed countries
2. Drawing of population distribution maps using symbols–Simple and multiple dots, circles and spheres, choropleth maps of population density distribution
3. Drawing of Pie Diagram (Using population data of occupational structure, population composition)
4. Trend of population growth, growth of urban population and settlements
5. Practical records and viva –voce

**Text Book:**

1. Hussain, Majid (2012) *Human Geography*. Rawat Publications, Jaipur

**Reference Books:**

- ❖ *Human & Economic Geography- Go cheng leong*
- ❖ Johnston R; Gregory D, Pratt G. et al. (2008) *The Dictionary of Human Geography*, Blackwell Publication.
- ❖ Daniel, P.A. and Hopkinson, M.F. (1989). *The Geography of Settlement*, Oliver & Boyd, London. *Human Geography*, Rupa Publication
- ❖ *Human Geography*, B.S. Negi
- ❖ Chandna, R.C. (2010) *Population Geography*, Kalyani Publisher.
- ❖ Hassan, M.I. (2005) *Population Geography*, Rawat Publications, Jaipur
- ❖ Jordan-Bychkov et al. (2006) *The Human Mosaic: A Thematic Introduction to Cultural Geography*. W. H. Freeman and Company, New York.

## C-2.2 : CLIMATOLOGY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

### THEORY

#### UNIT - I:

Composition and Structure of the atmosphere, Weather and Climate : Elements and Factors, Insolation and Heat Budget of the Earth, World distribution of Temperature –Factors of Distribution, Temperature Inversion.

#### UNIT - II:

Atmospheric Pressure and Winds – Pressure Belts and Planetary Winds, Periodic and local winds, Factors affecting general circulation of wind, Coriolis effect, Jet Stream.

#### UNIT - III:

Humidity: relative and absolute, Forms of Condensation, types of clouds, types of precipitation, classification of climate of Koppen and Thornthwait.

#### UNIT - IV:

Concept of air mass, classification, characteristics, distribution and modification, thunderstorms and tornado, Tropical Cyclones, Temperate Cyclones, weather forecasting.

### PRACTICAL

1. Introduction to use of simple weather observation instruments: Thermometer, Barometer, hygrometer, anemometer, wind vane, Rain Gauge, Stevenson Screen, Interpretation of weather maps
2. Drawing of Climograph and Hythergraph, Wind rose diagram.
3. Drawing of isopleth maps : isotherms, isobars and isohyets
4. Spatial and temporal distribution of rainfall using choropleth techniques and trend graphs
5. Record & Viva-Voce carries 10 marks

#### Text Books:

1. Lal, D S (2006): Climatology, Prayagn Pustak Bhavan, Allahabad

#### Reading List:

- ❖ Barry R. G. and Carleton A. M., 2001: *Synoptic and Dynamic Climatology*, Routledge, UK.
- ❖ Barry R. G. and Corley R. J., 1998: *Atmosphere, Weather and Climate*, Routledge, New York.
- ❖ Critchfield H. J., 1987: *General Climatology*, Prentice-Hall of India, New Delhi
- ❖ Lutgens F. K., Tarbuck E. J. and Tasa D., 2009: *The Atmosphere: An Introduction to Meteorology*, Prentice-Hall, Englewood Cliffs, New Jersey.
- ❖ Oliver J. E. and Hidore J. J., 2002: *Climatology: An Atmospheric Science*, Pearson Education, New Delhi.
- ❖ Trewartha G. T. and Horne L. H., 1980: *An Introduction to Climate*, McGraw-Hill.
- ❖ Gupta L S(2000): *Jalvayu Vigyan*, Hindi Madhyam Karyanvay Nidishalya, Delhi Vishwa Vidhyalaya, Delhi
- ❖ Vatal, M (1986): *Bhautik Bhugol*, Central Book Depot, Allahabad
- ❖ Singh, S (2009): *Jalvayu Vigyan*, Prayag Pustak Bhawan, Allahabad

## GE-2.3 : INDIAN ECONOMY - I

Full Marks – 100  
Mid Sem – 20/1hr  
End Sem – 80/3 hrs

#### UNIT - I: Introduction to Indian Economy and Current Challenges

Colonialism & British Rule: Exploitation and under-development in India; Basic features of India Economy; Indian Economy as a developing economy; Demographic trends in India - Size and growth of population, Occupational structure, Sex composition, Age structure and demographic dividend; Causes of population growth and population policy; The problem of unemployment and recent policies for employment generation; The problem of inequality in income distribution and its causes, Policies to address inequality.

#### UNIT - II: Indian Agriculture

Role of Agriculture in Indian Economy; Cause of low productivity, Green Revolution and Land Reforms, Agricultural Finance-Sources and Problems; Agricultural Marketing in India.

#### UNIT - III: Industrial Development in India

Role of Industrialization in Indian Economy; Small Scale & Cottage Industries: Meaning, Role, Problems and Remedies; Industrial Policies of 1948, 1956, 1977 and 1991; Problems of Industrial Development in India; Industrial Sickness.

**UNIT - IV: Service Sector in India**

Growth & Contribution to GDP; Composition and relative importance of service sector; Factors determining growth of the sector; ICT and IT – Spread and Policy; Sustainability of services led growth.

**Text Book:**

1. Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai

**Reference Book:**

- ❖ Dutt R. and Sundharam K. P. M. Indian Economy. S. Chand & Company Ltd., New Delhi.

**GE-2.3 : ସାହିତ୍ୟ ଅଧ୍ୟୟନ**

**Full Marks – 100**  
**Mid Sem – 20/1hr**  
**End Sem – 80/3 hrs**

**୧ମ ଏକକ / ୟୁନିଟ୍ – ୧ : ଗଞ୍ଜ ସାହିତ୍ୟ**

ବୁଢ଼ା ଶଙ୍ଖାରି – ଲକ୍ଷ୍ମୀକାନ୍ତ ମହାପାତ୍ର

ମାଗୁଣୀର ଶଗଡ଼ – ଗୋଦାବରୀଶ ମହାପାତ୍ର

ଶିକାର – ଭଗବତୀ ଚରଣ ପାଣିଗ୍ରାହୀ

**୨ୟ ଏକକ / ୟୁନିଟ୍ – ୨ : ଉପନ୍ୟାସ ସାହିତ୍ୟ**

ଶାସ୍ତି – କାହ୍ନୁଚରଣ ମହାନ୍ତି, ଫ୍ରେଣ୍ଡ୍‌ସ୍ ପବ୍ଲିଶର୍ସ, କଟକ

**୩ୟ ଏକକ / ୟୁନିଟ୍ – ୩ : ନାଟକ**

ଶେଷ କଥା – ଡକ୍ଟର ନାରାୟଣ ସାହୁ, ସତ୍ୟନାରାୟଣ ବୁକ୍ ଷୋର, କଟକ

**୪ର୍ଥ ଏକକ / ୟୁନିଟ୍ – ୪ : ରମ୍ୟ ରଚନା**

ବାଇ ମହାନ୍ତି ପାଞ୍ଜି (ପ୍ରଥମ ବିଡ଼ା) – ଗୋପାଳ ଚନ୍ଦ୍ର ପ୍ରହରାଜ

ବରୁଆ – ଗୋବିନ୍ଦ ତ୍ରିପାଠୀ

ସାଧୁ ସଙ୍ଗ – ଚୌଧୁରୀ ହେମକାନ୍ତ ମିଶ୍ର

**ସହାୟକ ଗ୍ରନ୍ଥସୂଚୀ :**

୧. କାହ୍ନୁଚରଣ ବିଶେଷାଙ୍କ, କୋଣାର୍କ, ଓଡ଼ିଶା ସାହିତ୍ୟ ଏକାଡେମୀ
୨. ଓଡ଼ିଆ କ୍ଷୁଦ୍ରଗଳ୍ପର ଇତିହାସ – ବୈଷ୍ଣବ ଚରଣ ସାମଲ, ଫ୍ରେଣ୍ଡ୍‌ସ୍ ପବ୍ଲିଶର୍ସ, କଟକ
୩. ଓଡ଼ିଆ କଥାସାହିତ୍ୟର କଥା ଓ ରମ୍ୟରଚନା – ମହାପାତ୍ର ନୀଳମଣି ସାହୁ, ଓଡ଼ିଶା ବୁକ୍ ଷୋର, କଟକ
୪. ଶାସ୍ତି – କାହ୍ନୁଚରଣ ମହାନ୍ତି, ଫ୍ରେଣ୍ଡ୍‌ସ୍ ପବ୍ଲିଶର୍ସ, କଟକ
୫. ଉପର ସତୁରୀ ଓଡ଼ିଆ ନାଟକ – ହେମନ୍ତ କୁମାର ଦାସ, ଗ୍ରନ୍ଥମନ୍ଦିର, କଟକ
୬. ଶେଷ କଥା – ନାରାୟଣ ସାହୁ, ସତ୍ୟନାରାୟଣ ବୁକ୍ ଷୋର, କଟକ

## GE-2.3 : INDIAN PHILOSOPHY

Full Marks – 100  
Mid Sem – 20/1hr  
End Sem – 80/3 hrs

### UNIT – I:

Salient features of Indian philosophy, Carvaka epistemology and metaphysics, Jainism Syadvada and Anekantavada

### UNIT – II:

Buddhism- The Four Noble Truths, Doctrine of Dependent origination, No Soul Theory, Nirvana

### UNIT – III:

Samkhya- Purusa, Prakriti, Theory of causation Yoga- Astanga Yoga

### UNIT – IV:

Nyaya- Theory of Inference, Vaisheshika- Padarthas (Categories)

#### Prescribed Books:

1. Dutta and Chatterjee: An Introduction to Indian Philosophy

#### Books for Reference:

- ❖ C.D Sharma: A critical Survey of Indian Philosophy
- ❖ G.C Nayak: Bharatiya Darshana (Odia)
- ❖ B.B. Choudhury: Bharatiya Darshana Ruparekha (Odia Translated book)

## AECC-2.4 : ENVIRONMENTAL STUDIES

Full Marks – 100  
Mid Sem – 20/1 hr  
End Sem – 80/3 hrs

### UNIT – I

The Environment: The Atmosphere, Hydrosphere, Lithosphere, Biosphere, Ecology, Ecosystem, Biogeochemical Cycle (Carbon Cycle, Nitrogen Cycle), Environment Pollution: Air Pollution, Water Pollution, Soil Pollution, Radiation Pollution

### UNIT – II

Population Ecology: Individuals, Species, Pollution, Community, Control Methods of Population, Urbanization and its effects on Society, Communicable Diseases and its Transmission, Non-Communicable Diseases

### UNIT – III

Environmental Movements in India: Grass root Environmental movements in India, Role of women, Environmental Movements in Odisha, State Pollution Control Board, Central Pollution Control Board

### UNIT – IV

Natural Resources: Conservation of Natural Resources, Management and Conservation of Wildlife, Soil Erosion and Conservation, Environmental Laws: Water Act, 1974, Air Act, 1981, The Wildlife (Protection) Act, 1972, Environment Protection, 1986, Natural Disasters and their Management

#### Books Recommended:

- ❖ Dash MC and Mishra PC, Man and Environment, McMillan, London.
- ❖ Mishra PC and Das MC, Environment and Society, McMillan, London.
- ❖ Odeem EP, Fundamentals of Ecology, Natraj Publication.
- ❖ Mishra DD, Fundamental Concept in Environmental Studies, S. Chand, New Delhi.
- ❖ Asthana DK and Asthana Meera, A Text book of Environmental Studies, S. Chand, New Delhi.
- ❖ Bharuach Erach, Textbook for Environmental Studies, Universities Press India Pvt. Ltd., Hyderabad.

## SEMESTER-III

### C-3.1 : OCEANOGRAPHY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

#### THEORY

##### UNIT - I:

Bottom Relief of the Oceans: Continental shelf, slope, deep sea plain, ocean deeps, mid oceanic ridges, relief features of the Atlantic, Indian and Pacific Ocean

##### UNIT - II:

Origin of ocean water, Temperature and salinity of ocean -distribution and determinants, T-S Diagram Ocean Deposits: classification and Distribution.

##### UNIT - III:

Movement of Ocean water- Waves, Currents and Tides: Types and characteristics, factors associated with the origin of ocean currents and their impacts, Ocean currents of the Atlantic, Indian and Pacific ocean

##### UNIT - IV:

Coral Reefs and atoll: Types, Theories of Origin (Subsidence theory of Darwin and Dana, Glacial Control theory of Louis Agassiz), Marine resources

#### PRACTICAL

1. Interpretation of Topographical Maps.
2. Demarcation of catchment basins and drainage networks, stream ordering and identification and interpretation of drainage patterns.
3. Enlargement and reduction of maps: Graphical and instrumental, use of pantographs
4. Practical records and viva –voce

##### Text Books:

1. Sharma R. C. and M. Vital: Oceanography
2. Lal, D. S. – Oceanography.

##### Reference Books:

- ❖ King, L. C. : Oceanography
- ❖ Singh, S. – Physical Geography

### C-3.2 : STATISTICAL METHODS IN GEOGRAPHY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

#### THEORY

##### UNIT - I:

Use of Data in Geography: Spatial and attribute data, Geographical Data Matrix, Types and Sources of Data (Discrete and grouped, primary and secondary), Scales of Measurement of data (Nominal, Ordinal, Interval, Ratio). Distribution of Data: Normal and Bi-nomial

##### UNIT - II:

Descriptive Statistics: Frequency distribution (grouped and ungrouped data), measures of Central Tendency (Mean, Median and Mode), Types of Sampling-Random, stratified, systematic and purposive

##### UNIT - III:

Measures of Dispersion (Variance, Mean Deviation, Standard Deviation and Coefficient of Variation. Chi-square test

##### UNIT - IV:

Measures of Association:, Product moment correlation, Rank correlation, test of significance, coefficient of determination and linear regression.

## PRACTICAL

1. Drawing of histogram, frequency curve and ogive in grouped and discrete data
2. Calculation & Drawing of graphs showing mean, median, mode in grouped & discrete data
3. Calculation of mean deviation, standard deviation, coefficient of variation,
4. Practical records and viva –voce

### Text Books:

1. Mahmood A., 1977: *Statistical Methods in Geographical Studies*, Concept.
2. Sarkar, A. (2013) *Quantitative geography: techniques and presentations*. Orient Black Swan Private Ltd., New Delhi

### Reference Books:

- ❖ Hammond P. and McCullagh P. S., 1978: *Quantitative Techniques in Geography: An Introduction*, Oxford University Press.
- ❖ Yeates M., 1974: *An Introduction to Quantitative Analysis in Human Geography*, McGraw Hill, NY
- ❖ Silk J., 1979: *Statistical Concepts in Geography*, Allen and Unwin, London
- ❖ King L. S., 1969: *Statistical Analysis in Geography*, Prentice-Hall
- ❖ Pal S. K., 1998: *Statistics for Geoscientists*, Tata McGraw Hill, New Delhi
- ❖ Ebdon D., 1977: *Statistics in Geography: A Practical Approach*.

## C-3.3 : STATISTICAL METHODS IN GEOGRAPHY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

### THEORY

#### UNIT - I:

Physiography of Odisha, River System, Climate, Soil, Natural Vegetation

#### UNIT - II:

Agriculture: (a) Production and Distribution of Rice, Pulses, Oil seeds; (b) Agricultural Problems and Prospects

#### UNIT - III:

Minerals and power resources:

(a) Distribution and production of Iron Ore, Bauxite, Chromite, Coal

(b) Industrialization in Odisha – Problems and prospects, Iron and steel industry, Aluminum Industry, Textile, thermal power plants

#### UNIT - IV:

(a) Population: Distribution and Growth, distribution of tribes and tribal population

(b) Urbanization-Growth of urban population and urban centers

(b) Transport: Roadways & Railways

## PRACTICAL

1. Rainfall distribution of Odisha using choropleth techniques (State & District/ District & block)
2. Temperature / rainfall distribution using isopleth techniques giving point level data of important observation centers
3. Drawing of time series graphs to depict decadal growth of population/ urban population
4. Cartographic representation of socio-economic data (One, two three dimensional)
5. Practical records and viva –voce

### Text Book:

1. Sinha, B. N. - Geography of Odisha

### Reference Book:

- ❖ Roy, G. C.- Geography of Odisha



## GE-3.4 : ARCHAEOLOGICAL ANTHROPOLOGY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

### THEORY

#### UNIT - I :

Introduction, Definition and scope of archaeological anthropology; Relation with other disciplines; Methods of studying archaeological anthropology.

#### UNIT - II :

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

#### UNIT - III :

Geochronology of Pleistocene Epoch; Glacial and Interglacial; Pluviation and Inter Pluviation; Different types of geoclimatic events.

#### UNIT - IV :

Understanding Culture; Technique of tool manufacture and estimation of their relative efficiency; Classification of tools: primary and combination of fabrication techniques; Earliest evidence of culture in the world: Konso, Oldorgesaille, Olduvai Gorge, Pirro Nord, Damanisi, Attirampakkam, Isampur, Kuliana.

### 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

#### Text book recommended :

1. Bhattacharya D.K. (1990). *An introduction to Prehistoric Archaeology, Delhi*, Hindustan Publishing Corporation..
2. Rammi Reddy, V. 1987. *Elements of Prehistory*, New Delhi: Mittal Publications
3. Sankalia H.D. (1964). *Stone Age Tools*. Poona Deccan College

#### Suggested Readings :

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

## GE-3.4 : LANGUAGE AND LINGUISTICS

Full Marks – 100  
Mid Sem – 20/1hr  
End Sem – 80/3 hrs

#### Introduction:

*This paper aims to offer the students some fundamental knowledge in Linguistics and English Language Teaching (ELT). It also seeks to acquaint the students with the variety of English that people come in contact with in contemporary times with a special emphasis on Asia and in particular, India.*

#### UNIT - I:

Language : What is Language, Linguistics, Branches and Scope, Applied Linguistics Global Englishes: Who Speaks English today? Standard Language and Language Standards, Language Variation, Postcolonial English, Pidgin and Creole, English in Asia and Europe

**UNIT - II:**

Phonology and Morphology

**UNIT - III:**

Syntax

**UNIT - IV:**

Semantics

**Reference Books:**

- ❖ *Introductory book on Linguistics and Phonetics* by R L Varshney
- ❖ *Global Englishes: A Resource Book for Students*, Jennifer Jenkins, 3rd Edn, Special Indian Edition, Routledge, 2016
- ❖ *An Introduction to Language and Communication*,
- ❖ A R Parhi, 'Localising the Alien: Newspaper English and the Indian Classroom', *English Studies in India*, Springer, 2018.
- ❖ Adrian Akmajian, R. A. Demers, Ann K Farmer and R. M. Harnish, Prentice Hall of India, 2012
- ❖ David Crystal, *Linguistics*
- ❖ Braj B Kachru, *The Indianization of English* (OUP)
- ❖ David Crystal, *English as a World Language*

**GE-3.4 : HISTORY OF INDIA II (1750-1950)**

**Full Marks – 100**  
**Mid Sem – 20/1hr**  
**End Sem – 80/3 hrs**

**UNIT – I: Foundation and Expansion of British Rule**

1. Battle of Plessey (1757) and Conquest of Bengal
2. Conquest of Mysore and Maharashtra
3. Expansion through Diplomacy: Subsidiary Alliance and Doctrine of Lapse

**UNIT – II: Consolidation of British Rule and Indian Responses**

1. Peasant & Tribal Resistance against British Rule: Sanyasi Rebellion (1763); Kondh Rebellion in Ghumusar, Santal Rebellion
2. Revolt of 1857: Nature and Significance
3. Land Revenue Settlements: Permanent Settlement, Ryotwari and Mahalwari Settlement

**UNIT – III: Social and Cultural Policies**

1. Socio-Religious Reform Movements: Brahmo Samaj, Arya Samaj, Theosophical Society, Aligarh Movement.
2. Growth of Press and Education
3. Issues of Caste and Gender: Jyotiba Phule- Women Question and Issues, Depressed Class.

**UNIT – IV: Indian National Movement**

1. Politics of Moderates and Extremists (1885-1920)
2. Gandhian Mass Movements (Non-Cooperation, Civil Disobedience and Quit India Movements), (1920-1940)
3. Communal Politics and Partition
4. Making of the Democratic Constitution

**Suggested Text Books:**

1. A.R. Desai, *Social Background of Indian Nationalism*, Popular, Mumbai
2. Priyadarshi Kar, *Comprehensive History of Modern India*.

**Reference Reading:**

- ❖ Sumit Sarkar, *Modern India : 1885-1947*, Mac Millan.
- ❖ B.R.Mani, *Debrahminising History: Dominance and Resistance in Indian Society*, Manohar, New Delhi, First Published 2005.
- ❖ Chandra Bharil, *Social and Political Ideas of B.R. Ambedkar*, Aalekh Publishers, Jaipur, 1977.
- ❖ Sumit Sarkar, *Modern India (1885-1947)*, Mac Millan, Delhi, First Published 1983.
- ❖ Hirendra N.Mukherjee, *Gandhi, Ambedkar and the Extirpation of Untouchability*, PPT, New Delhi.

## GE-3.4 : GOVERNANCE: ISSUES AND CHALLENGES

Full Marks – 100  
Mid Sem – 20/1hr  
End Sem – 80/3 hrs

**Objectives:** This paper deals with concepts and different dimensions of governance highlighting the major debates in the contemporary times. There is a need to understand the importance of the concept of governance in the context of a globalizing world, environment, administration, development. The essence of governance is explored through the various good governance initiatives introduced in India.

### UNIT-I: Government and governance: concepts

- (i) Governance: Meaning, Nature and Types
- (ii) Role of State in the Era of Globalisation: State, Market and Civil Society

### UNIT-II : Good Governance

- (i) Good Governance
- (ii) Sustainable Development and Governance

### UNIT-III: Local Governance

- (i) Democratic Decentralization: Institutions of Local Governance (PRIs),
- (ii) People' Participation in Local Governance & Deepening Democracy

### UNIT-IV : Good Governance Initiatives In India

- (i) Public Service Guarantee Acts & Electronic Governance
- (ii) Citizens Charter & Right to Information, Corporate Social Responsibility

#### Text Books:

1. A Baviskar, ((1995) The Belly of the River: Tribal Conflict Over Development in the Narmada Valley', Delhi, Oxford University Press.
2. A. Parel (2000) (ed) 'Gandhi, Freedom and Self-Rule', New Delhi, Lexington Books.
3. B. Parekh, (1997) 'Gandhi: A Brief Insight', Delhi, Sterling Publishing Company.
4. B. Parekh, (1999) 'Colonialism, Tradition and Reform: An Analysis of Gandhi's Political Discourse', New Delhi, Sage Publication.
5. D. Hardiman, (2003) 'Gandhi in his Time and Ours'. Delhi, Oxford University Press.

#### Reference Books:

- ❖ R Iyer, (ed) (1993) 'The Essential Writings of Mahatma Gandhi', New Delhi, Oxford University Press.
- ❖ R. Ramashray, (1984) 'Self and Society: A Study in Gandhian Thought', New Delhi, Sage Publication.

## SECC-I-3.5 : COMMUNICATIVE ENGLISH

(Enriching Linguistic Knowledge & Communication Proficiency)

Full Marks – 100  
Mid Sem – 20/1hr  
End Sem – 80/3 hrs

### UNIT-I : BUSINESS COMMUNICATION AND GRAMMAR

Why English Communication is Essential and How to Improve the Skill?

Introduction to Voice and Accent, Why do we have such different accents?, Accent Training-Consequences, Voice and accent in the Enterprise Industry, Globally Comprehensible Accent, Introduction to Phonetics, International

Phonetic Alphabet

Consonant Sounds

Vowels

Diphthongs

A Few Phonic Rules

Word Stress: Syllables

Intonation : Intonation and Stress

Pacing and Chunking : Common Patterns of Pacing, Importance of Chunking

Fluency

Indianisms : Errors relating to Grammar, Vocabulary

### UNIT-II : GRAMMAR

English: Spoken Versus Written Communication

Nouns : Kinds of Nouns, Activity 3: Noun Ping-pong, Nouns-Number, Noun-Gender, Countable and Uncountable Nouns

Pronouns : Reflexive Pronouns, Relative Pronouns, Demonstrative Pronouns, Interrogative Pronouns, Indefinite pronouns, Activity 4: Sentence Auction

Adjectives : Activity 5 : Picture perfect, Positioning of adjectives, Comparative Degrees of Adjectives, Order of Adjectives

Adverbs : Kinds of Adverb, Degree of Comparison, Word Order with Adverbs, Activity 6: Relay Race

Prepositions : Activity 7: Treasure Hunt, Activity 8: Route Map, Prepositions with Adjectives, Nouns and Verbs

Conjunctions : Coordinating conjunctions, Subordinating Conjunctions, Correlative Conjunctions, Connecting Adverbs, Activity 9: The Socks Story

Verbs : Verb Classification, List of irregular verbs, Activity 10: Word Search

Subject and verb agreement, Activity 11: Tossed Word Salad, Activity 12: The Sentence Pageant Determiners and

Modifiers : Kinds of determiners, The Definite and the Indefinite Article, Definite Article: The, Activity 13: Proof Reading

Tenses : Reference Table, Present Tense, Activity 14: Instruction Manual, Activity 15: Commentary, Past Tense, Activity 16: The Chain List, Activity 17: Transcription, Future Tense, Activity 18: This Week for You, Activity 19: Verb Grand Prix

Verb Grand Prix

Punctuation : Forms of Punctuation

### UNIT-III : READING COMPREHENSION

Reading – A 7 Step Process, Techniques to enhance students' reading skills, Types of reading skills, Skimming, Scanning, Extensive reading, Intensive reading, Three levels of Reading, Improving your reading speed, Reading Comprehension Practice Exercises

#### Text Books:

1. Communicative English – Odisha State Higher Education Council, Bhubaneswar

## SEMESTER-IV

### C-4.1 : EVOLUTION OF GEOGRAPHICAL THOUGHT

Full Marks – 100

Mid Sem – 15/1hr

End Sem Theory – 60/3 hrs

End Sem Practical – 25/3 hrs

#### THEORY

##### UNIT - I:

Geographical concepts of ancient and mediaval period: Contributions of Greek, Roman & Indian and Arab scholars.

##### UNIT - II:

Modern geographical thought: Contributions of Alexander Von Humboldt, Carl Ritter, Ratzel, Vidal De La Blache and Mackinder.

##### UNIT - III:

Dichotomy in Geography– Environmental Determinism and Possibilism, Systematic and Regional Geography, Ideographic and Nomeothetic, Physical and Human Geography.

##### UNIT - IV:

Recent Trends in development of geography– Quantitative Revolution in Geography, Behavioural approach in Geography, radicalism in Geography, Recent changes in methods and approaches to geography.

#### PRACTICAL

1. Introduction to and use of survey Instruments: Prismatic Compass, Leveling, Theodolite /Total Station,
2. Methods of Surveying: Radiation, Intersection, Resection Traversing (Close and Open)
3. Use of GPS / DGPS in observation of coordinate values of a number of points and preparing an outline map of an area by interpolation
4. Preparation and uses of questionnaire and schedule in a socio economic survey
5. Practical records and viva –voce

#### Text Book:

1. Evolution of Geographical Thought- Majid Hussain

#### Reference Books:

- ❖ Dikshit R. D., 1997: Geographical Thought: A Contextual History of Ideas, Prentice– Hall India.
- ❖ Hartshorn R., 1959: *Perspectives of Nature of Geography*, Rand Mac Nally and Co.

- ❖ Martin Geoffrey J., 2005: *All Possible Worlds: A History of Geographical Ideas*, Oxford.
- ❖ Holt-Jensen A., 2011: *Geography: History and Its Concepts: A Students Guide*, SAGE.
- ❖ Kapur A., 2001: *Indian Geography Voice of Concern*, Concept Publications.

## C-4.2 : ECONOMIC GEOGRAPHY

**Full Marks – 100**  
**Mid Sem – 15/1hr**  
**End Sem Theory – 60/3 hrs**  
**End Sem Practical – 25/3 hrs**

### THEORY

#### UNIT - I:

Meaning and scope of economic geography, classification of economic activities, Factors affecting location of economic activity with special reference to agriculture and industry, Von Thunen Theory of location of agricultural activity and Weber's theory of Industrial Location.

#### UNIT - II:

Primary economic activities: Types and problems, (Subsistence farming, shifting cultivation, forestry and fishing, mining and quarrying), agricultural regions of the world.

#### UNIT - III:

Secondary economic activities: Manufacturing (Cotton Textile, Iron and Steel), Industrial Regions of the world: Special Economic Zones and its significance.

#### UNIT - IV:

Tertiary economic activities: Transport- Roads and Railways, Air and Water ways, Trade and commerce

### PRACTICAL

1. Determination of agricultural efficiency (Kendal and Bhatia method) and to show on maps.
2. Drawing of Isotims, Isodapanes and industrial location based on Weber's theory.
3. Traffic flow diagram and travel time maps (Isochrones).
4. Practical records and viva –voce

#### Text Books:

1. Roy, Pritish: *Economic Geography*
2. Gautam, Alaka: *Economic Geography*,

#### Reference Books:

- ❖ Alexander J. W., 1963: *Economic Geography*, Prentice-Hall Inc., Englewood Cliffs, New Jersey.
- ❖ Wheeler J. O., 1998: *Economic Geography*, Wiley.
- ❖ Durand L., 1961: *Economic Geography*, Crowell.
- ❖ Willington D. E., 2008: *Economic Geography*, Husband Press.
- ❖ Clark, Gordon L.; Feldman, M.P. and Gertler, M.S., eds. 2000: *The Oxford*

## C-4.3 : ENVIRONMENTAL GEOGRAPHY

**Full Marks – 100**  
**Mid Sem – 15/1hr**  
**End Sem Theory – 60/3 hrs**  
**End Sem Practical – 25/3 hrs**

### THEORY

#### UNIT - I:

Environmental Geography – Concept and Scope, Types and Characteristics of environment:

Biotic, abiotic and cultural, Environmental contrast (Global, Continental, Local) Environmental control and concept of tolerance (Light, Temperature, Water, Topography and Edaphic factors)

#### UNIT - II:

Ecosystem – Concept, Structure and Functions, Trophic level, food Chain and food web, Biogeo-chemical Cycle (Nitrogen and Carbon), Energy flow in Ecosystem.

#### UNIT - III:

Concept of Biome, Major biomes of the world and their characteristics: Equatorial, Subtropical, Temperate and Polar, Nature and characteristics of environmental pollution of water and air

**UNIT - IV:**

Environmental degradation; causes and consequences, Environmental conservation methods, programmes and policies in India, Role of International agencies (UNO, UNEP, UNDP, IUCN in environmental management, concept and strategies of sustainable development, Green Tribunal and its functions in India.

**PRACTICAL**

**Project Work :**

Submission of a Project Report on any environmental problem of global/national/local significance

**Text Books:**

1. Santra, S.C *Environmental Science*
2. Singh S., 1997: *Environmental Geography*, Prayag Pustak Bhawan. Allahabad.

**Reference Books:**

- ❖ Chandna R. C., 2002: *Environmental Geography*, Kalyani, Ludhiana.
- ❖ Cunningham W. P. and Cunningham M. A., 2004: *Principals of Environmental Science: Inquiry and Applications*, Tata Macgraw Hill, New Delhi.
- ❖ Goudie A., 2001: *The Nature of the Environment*, Blackwell, Oxford.
- ❖ Miller G. T., 2004: *Environmental Science: Working with the Earth*, Thomson Brooks Cole, Singapore.
- ❖ Odum, E. P. et al, 2005: *Fundamentals of Ecology*, Ceneage Learning India.

**GE-4.4 : INDIAN ECONOMY - II**

**Full Marks – 100**  
**Mid Sem – 20/1hr**  
**End Sem – 80/3 hrs**

**UNIT - I: External Sector in India**

Trends, Composition & Direction in exports from and imports of India; Problems of Balance of Payment: Causes of deficit in BOP & measures to correct it; Trade Policy- Export Promotion Vs Import Substitution; Foreign Trade Policy of India; WTO and India.

**UNIT - II: Financial Markets in India**

Commercial Banking in India- Nationalization of Banks; Lead bank scheme and branch expansion; RBI - Functions, Monetary Policy; Development Banking- IFCI, IDBI, SIDBI and NABARD

**UNIT - III: Indian Public Finance**

Public Expenditure-Growth and Composition, Causes of Growth of Public Expenditure in India: Tax Revenue of Central and State Governments; Concept of VAT; Deficit Financing in India-Revenue, Budget, Fiscal and Primary Deficits; Purpose and Effects of Deficit Financing; India's Fiscal Policy-Objectives.

**UNIT - IV: Current Challenges Facing Indian Economy**

Inflation – Causes, Consequences and Anti-inflationary Policy; Poverty – Poverty line and Estimates, Major Poverty Alleviation Programmes; Environmental Degradation – Growth and Environment; Population Growth and Environment; Environment Policy; Economic Reforms- Globalization, Macroeconomic Stabilization, Structural Reforms, and their impact on the Indian Economy; Foreign capital and MNCs-Role and consequences.

**Text Book:**

1. Misra, S. K. and Puri V. K. *Indian Economy — Its Development Experience*. Himalaya Publishing House, Mumbai.

**Reference Book:**

- ❖ Dutt R. and Sundharam K. P. M. *Indian Economy*. S. Chand & Company Ltd., New Delhi.
- ❖ Basu, Kaushik (2016): *An Economist in the Real World: The Art of Policy Making in India*, enguin.

**GE-4.4 : ପ୍ରାଚୀନ, ମଧ୍ୟଯୁଗ ଓ ଆଧୁନିକ ଓଡ଼ିଆ ସାହିତ୍ୟ**

**Full Marks – 100**  
**Mid Sem – 20/1hr**  
**End Sem – 80/3 hrs**

**୧ମ ଏକକ / ୟୁନିଟ୍ – ୧ : ସାରଳା ମହାଭାରତରେ କାହାଣୀ**

ସତ୍ୟଆତ୍ମ

ତୁଳସୀବଣ ବାଘ

ଗଙ୍ଗା ବୋଇଲେ ଥିବି ଗାଁଗୀ ବୋଇଲେ ଯିବି

**୨ୟ ଏକକ / ୟୁନିଟ୍ – ୨ : ବଳରାମ ଦାସ ଓ ଜଗନ୍ନାଥ ଦାସଙ୍କ କାହାଣୀ**

ବଳରାମ ଦାସଙ୍କ ବଉଳା ଅଧ୍ୟାୟ ଓ ମୃଗୁଣୀ ସ୍ତୁତି

ଜଗନ୍ନାଥ ଦାସଙ୍କ କପୋତ ଉପାଖ୍ୟାନ ଓ ପିଙ୍ଗଳା ଉପାଖ୍ୟାନ

**୩ୟ ଏକକ / ୟୁନିଟ୍ – ୩ : ମଧ୍ୟକାଳୀନ ସାହିତ୍ୟ ପ୍ରଣାଳୀ ସଂକ୍ଷିପ୍ତ ପରିଚୟ**

ଦୀନକୃଷ୍ଣ ଦାସ, ଅଭିମନ୍ୟୁ ସାମନ୍ତସିଂହାର, କବିସମ୍ରାଟ ଉପେନ୍ଦ୍ର ଭଞ୍ଜ, କବିସୂର୍ଯ୍ୟ ବଳଦେବ ରଥ

**୪ର୍ଥ ଏକକ / ୟୁନିଟ୍ – ୪ : ଆଧୁନିକ ଯୁଗର ସାହିତ୍ୟ ପ୍ରଣାଳୀ ସଂକ୍ଷିପ୍ତ ପରିଚୟ**

ରାଧାନାଥ ରାୟ, ଫକୀର ମୋହନ ସେନାପତି, ଗଙ୍ଗାଧର ମେହେର, ମାୟାଧର ମାନସିଂହ

**ସହାୟକ ଗ୍ରନ୍ଥସୂଚୀ :**

୧. ଓଡ଼ିଆ ସାହିତ୍ୟର ଇତିହାସ – ମାୟାଧର ମାନସିଂହ, ଗ୍ରନ୍ଥ ମନ୍ଦିର, କଟକ
୨. ଓଡ଼ିଆ ସାହିତ୍ୟର ଇତିହାସ – ସୂର୍ଯ୍ୟନାରାୟଣ ଦାଶ (୨ୟ ଓ ୩ୟ ଭାଗ), ଗ୍ରନ୍ଥ ମନ୍ଦିର, କଟକ
୧. ଓଡ଼ିଆ ସାହିତ୍ୟର ଇତିହାସ (୧୮୦୩-୧୯୨୦) – ନଟବର ସାମନ୍ତରାୟ, ବାଣୀ ଭବନ, ଭୁବନେଶ୍ୱର
୩. ଆଲୋକ ଓ ଅମୃତର କବି ଗଙ୍ଗାଧର – ମଣାନ୍ତ କୁମାର ମେହେର, ପତାପତି, ଭୁବନେଶ୍ୱର

**GE-4.4 : ETHICS: THEORY AND PRACTICE**

**Full Marks – 100**  
**Mid Sem – 20/1hr**  
**End Sem – 80/3 hrs**

**UNIT – I:**

Definition, Nature and Scope of Ethics, Distinction between moral and Non-moral action.

**UNIT – II:**

Distinction between factual and moral judgement, objects of moral judgement.

**UNIT – III:**

Moral Standards: Hedonism, Mill's Utilitarianism, And Kant's Rigorism and Perfectionism.

**UNIT – IV:**

Environmental Ethics: Anthropocentrism and Non- Anthropocentrism Bio-centric Egalitarianism, Deep Ecology

**Prescribed Books:**

1. J.N. Sinha- A Manual of Ethics
2. Peter Singer- Practical Ethics

**Books for Reference:**

- ❖ H. Sahoo(ed) Ethics theory and practice

## SECC-II-4.5 : QUANTITATIVE AND LOGICAL THINKING

Full Marks – 100  
Mid Sem – 20/1hr  
End Sem – 80/3 hrs

### I. QUANTITATIVE APTITUDE & DATA INTERPRETATION

#### UNIT – I :

Whole numbers, Integers, Rational and irrational numbers, Fractions, Square roots and Cube roots, Surds and Indices, Problems on Numbers, Divisibility  
Steps of Long Division Method for Finding Square Roots:

#### UNIT – II :

Basic concepts, Different formulae of Percentage, Profit and Loss, Discount, Simple interest, Ratio and Proportion, Mixture

#### UNIT – III :

Time and Work, Pipes and Cisterns, Basic concepts of Time, Distance and Speed; relationship among them

#### UNIT – IV :

Concept of Angles, Different Polygons like triangles, rectangle, square, right angled triangle, Pythagorean Theorem, Perimeter and Area of Triangles, Rectangles, Circles

#### UNIT – V :

Raw and Grouped Data, Bar Graphs, Pie charts, Mean, Median and Mode, Events and Sample Space, Probability

### II. LOGICAL REASONING

#### UNIT – I :

Analogy basing on kinds of relationships, Simple Analogy; Pattern and Series of Numbers, Letters, Figures. Coding-Decoding of Numbers, Letters, Symbols (Figures), Blood relations

#### UNIT – II :

Logical Statements– Two premise argument, More than two premise argument using connectives

#### UNIT – III :

Venn Diagrams, Mirror Images, Problems on Cubes and Dices

#### Books Prescribed :

1. Quantitative And Logical Thinking – Odisha State Higher Education Council, Bhubaneswar

## SEMESTER-V

### C-5.1 : REGIONAL PLANNING AND DEVELOPMENT

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

#### THEORY

#### UNIT - I:

Concept of a Region, Types of region: Formal, Functional and Planning Region, Need for Regional Planning, Evolution of Regional planning in India during five year plans, Characteristics of an Ideal Planning Region

#### UNIT - II:

Delineation of Planning Regions; Approaches and Methods, Regional disparity and imbalances in India, Planning Regions of India

#### UNIT - III:

Theories and Models for Regional Planning: Growth Pole Model of Perroux; Myrdal, Hirschman, Rostow.

#### UNIT - IV:

Policies and Programs for Rural and Regional Development Planning in India, Welfare Programs: IRDP, DPAP, Planning for backward regions, TDA and ITDP, planning for National Capital Region, Urban Area Programs, Concept and application of Human development Index in planning and development



## PRACTICAL

1. Transport network analysis –Alfa, Beta, Gama indices
2. Nearest neighbor analysis
3. Mapping regional Disparity based on socio-economic data
4. Mapping levels of development based on socio-economic data
5. Practical record and viva-voce

### Text Books:

1. Chand, Mahesh and V. K. Puri: Regional Planning
2. Mishra R. P : Regional Planning, Concept Publishers, New Delhi

### Reference Books:

- ❖ Friedmann J. and Alonso W. (1975): *Regional Policy - Readings in Theory and Applications*, MIT Press, Massachusetts.
- ❖ Haynes J., 2008: *Development Studies*, Polity Short Introduction Series.
- ❖ Peet R., 1999: *Theories of Development*, The Guilford Press, New York.
- ❖ UNDP 2001-04: *Human Development Report*, Oxford University Press.
- ❖ World Bank 2001-05: *World Development Report*, Oxford University Press, New

## C-5.2 : REMOTE SENSING AND GIS

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

### THEORY

#### UNIT - I:

Remote Sensing: Definition and Components, EMS and EMR, Wave and Particle theory of EMR, Types of platforms and sensors, Advantages and limitation of Remote Sensing, Energy interaction with Atmosphere and Earth Surface features (Water, soil and vegetation)

#### UNIT - II:

Aerial Photography, Principles of stereo vision, Geometry of Aerial Photographs, Image elements and visual interpretation of satellite images.

#### UNIT - III:

GIS: definition and components, Types of GIS Data (Spatial and attribute), Raster and Vector Data models, Special functions of GIS, GPS elements and its uses.

#### UNIT - IV:

Application of RS & GIS in land use and land cover mapping, Application in cartography and map making, Mapping of water resources and Natural Vegetation

## PRACTICAL

1. Stereoscopic vision using stereo cards and identification of objects from cards
2. Feature identification from aerial photographs using Pocket stereoscope/Mirror stereoscope
3. Feature identification from satellite imageries using visual interpretation
4. Identification and mapping of water bodies from satellite imageries
5. Digitization of Odisha state/block /district map and drawing of few point, line and polygon features

### Text Book

1. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).

### Reference Books:

- ❖ Bhatta, B. (2008) *Remote Sensing and GIS*, Oxford University Press, New Delhi.
- ❖ Campbell J. B., 2007: *Introduction to Remote Sensing*, Guildford Press
- ❖ Chauniyal, D. (2010) *Sudur Samvedana Avam Bhaugolik Suchna Pranali*, Sharda Pustak Bhawan, Allahabad.
- ❖ Jensen, J. R. (2005) *Introductory Digital Image Processing: A Remote Sensing Perspective*, Pearson Prentice-Hall.
- ❖ Joseph, G. 2005: *Fundamentals of Remote Sensing* United Press India.

## DSE-5.3 : POPULATION GEOGRAPHY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

### THEORY

#### UNIT - I:

Defining the Field, Nature and Scope of population geography; Sources of population data with special reference to India (Census, Vital Statistics and NSS), Population problems and issues.

#### UNIT - II:

Population Size, Distribution and Growth – Factors and Determinants, Theories of Growth –Malthusian Theory and Demographic Transition Theory.

#### UNIT - III:

Determinants of Population Growth: Fertility, Mortality and Migration-Measures, determinants and implications of fertility, mortality and migration.

#### UNIT - IV:

Population Composition and Characteristics – Age-Sex, Rural-Urban, Literacy, Occupational structure, Contemporary population issues–Ageing of Population; Declining Sex Ratio; HIV/AIDS, Trend of urbanization and related Problems.

### PRACTICAL

1. Population projection: AP, GP and R.G India method, calculation and graphical display
2. Drawing of triangular diagram and Lorenz curve
3. Construction of compound and superimposed pyramids
4. Calculation and presentation of population growth Rate, infant and neonatal mortality rate, maternal mortality ratio based on supplied data
5. Practical record and Viva-Voce

#### Text book:

1. Chandna R. C. and Sidhu M. S., 1980: *An Introduction to Population Geography*, Kalyani Publishers.

#### Reading List:

- ❖ Barrett H. R., 1995: *Population Geography*, Oliver and Boyd.
- ❖ Bhende A. and Kanitkar T., 2000: *Principles of Population Studies*, Himalaya Publishing House.
- ❖ Clarke J. I., 1965: *Population Geography*, Pergamon Press, Oxford.
- ❖ Jones, H. R., 2000: *Population Geography*, 3rd ed. Paul Chapman, London.
- ❖ Lutz W., Warren C. S. and Scherbov S., 2004: *The End of the World Population Growth in the 21<sup>st</sup> Century*, Earthscan.
- ❖ Newbold K. B., 2009: *Population Geography: Tools and Issues*, Rowman and Littlefield Publishers.
- ❖ Pacione M., 1986: *Population Geography: Progress and Prospect*, Taylor and Francis.
- ❖ Wilson M. G. A., 1968: *Population Geography*, Nelson.
- ❖ Panda B P (1988): *Janasankya Bhugol*, M P Hindi Granth Academy, Bhopal
- ❖ Maurya S D (2009) *Jansankya Bhugol*, Sharda Putak Bhawan, Allahabad
- ❖ Chandna, R C (2006), *Jansankhya Bhugol*, Kalyani Publishers, Delhi

## DSE-5.4 : RESOURCE GEOGRAPHY

Full Marks – 100  
Mid Sem – 15/1hr  
End Sem Theory – 60/3 hrs  
End Sem Practical – 25/3 hrs

### THEORY

#### UNIT - I:

Natural Resources: Concept, Types, Classification, and Functional Theory of Resources

#### UNIT - II:

Distribution and Utilization of Land Resources, Water Resources, Forest resources and Energy Resources and mineral resources.

#### UNIT - III:

Problems in exploitation, depletion and degradation of resources, Methods of conservation and management of Land, Water, Forest, mineral & Energy Resources

**UNIT - IV:**

Resource scarcity hypothesis , Concept and approach towards sustainable development of resources

**PRACTICAL**

1. Simple Correlation and interpretation of correlation coefficient
2. Test of significance of correlation coefficient
3. Rank Correlation
4. Simple Linear Regression, Drawing of scattergram and regression line
5. Practical record and viva-voce

**Text book:**

1. Singh, R.L. 1988 (Reprint) — India: A Regional Geography

**Reading List:**

- ❖ Gadgil M. and Guha R., 2005: *The Use and Abuse of Nature: Incorporating This Fissured Land: An Ecological History of India and Ecology and Equity*, Oxford University Press. USA.
- ❖ Jones G. & Hollier G., 1997: *Resources, Society and Environmental Management*, Paul Chapman, London.
- ❖ Klee G., 1991: *Conservation of Natural Resources*, Prentice Hall, Englewood.
- ❖ Mather A. S. and Chapman K., 1995: *Environmental Resources*, John Wiley and Sons, New York.
- ❖ Mitchell B., 1997: *Resource and Environmental Management*, Longman Harlow, England.
- ❖ Owen S. and Owen P. L., 1991: *Environment, Resources and Conservation*, Cambridge Univ. Press, N Y
- ❖ Rees J., 1990: *Natural Resources: Allocation, Economics and Policy*, Routledge. London.

**SEMESTER-VI**

**C-6.1 : GEOGRAPHY OF INDIA**

**Full Marks – 100**

**Mid Sem – 15/1hr**

**End Sem Theory – 60/3 hrs**

**End Sem Practical – 25/3 hrs**

**THEORY**

**UNIT - I:**

Triple tectonic divisions, Physiography of the Himalayas, Indo-Gangetic Plains, Peninsular India, Climate of India : Weather characteristics of SW and NE Monsoon, soil and natural vegetation

**UNIT - II:**

Population Distribution, Demographic structure, trend of population growth and urbanization, Distribution of major tribal groups of India, India's population problems and prospects

**UNIT - III:**

Distribution and utilisation of iron ore, nuclear minerals, coal, petroleum, natural gas, Factors of location and development of automobile, IT, Iron & Steel and Cotton Textile industries, Industrial regions of India

**UNIT - IV:**

Types of Irrigation in India, characteristics of Indian Agriculture, cropping pattern, production and distribution of rice and wheat, Tea and Coffee, problems of Indian Agriculture

**PRACTICAL**

1. Population density map of India by Choropleth
2. Graphical & cartographic presentation of socio-economic data
3. Pie chart showing occupational structure of India
4. Population pyramid for India
5. Practical record and viva-voce (10 marks)

**Text Books:**

1. Sharma, T.C. (2013) *Economic Geography of India*. Rawat Publication, Jaipur
2. Khullar, D. R. *India: A Comprehensive Geography*

**Reference Books:**

- ❖ Deshpande C. D., 1992: *India: A Regional Interpretation*, ICSSR, New Delhi.
- ❖ Mandal R. B. (ed.), 1990: *Patterns of Regional Geography – An International Perspective. Vol. 3 –Indian Perspective.*
- ❖ Sharma, T. C. 2003: *India - Economic and Commercial Geography*. Vikas Publ., New Delhi.
- ❖ Singh R. L., 1971: *India: A Regional Geography*, National Geographical Society of India.
- ❖ Singh, Jagdish 2003: *India - A Comprehensive & Systematic Geography*, Gyanodaya Prakashan, Gorakhpur.
- ❖ Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional Geography*, Methuen.

## C-6.2 : GEOGRAPHY OF INDIA

**Full Marks – 100**  
**Mid Sem – 15/1hr**  
**End Sem Theory – 60/3 hrs**  
**End Sem Practical – 25/3 hrs**

### **THEORY**

#### **UNIT - I:**

Concept of Hazards and Disasters, Natural and manmade hazards, Types of hazards, Concept of Vulnerability and risk, prevention, mitigation and management.

#### **UNIT - II:**

Disaster management cycle, Pre disaster planning, During disaster management, Post Disaster planning and development, community based disaster preparedness, Role of various stake holders (NGO, GO, NDMA, NIDM, NDRF, ODRAF and OSDMA) in disaster management.

#### **UNIT - III:**

Detail study of nature, characteristics and management of natural hazards: Flood, Cyclone, Drought, Earthquake, Tsunami and Land Slide

#### **UNIT - IV:**

Man made hazards and disasters, causes and impacts; Fire hazards, industrial hazards and nuclear hazards, Salient features of India's disaster management policy.

### **PRACTICAL**

**Project work** – Preparation of a case study report on a specific hazard / disaster based on literature review and or field work

#### **Text books:**

1. Singh, Savindar (2009): *Disaster Management*

#### **Reference books:**

- ❖ Mishra B.J : *Natural hazards and disaster management*
- ❖ Sundar I & Sezuiyan T : *Disaster management*
- ❖ Verma : *Encyclopedia of Disaster management*
- ❖ Eye Publication : *Vulnerable India*
- ❖ Sinha. A. – *Disaster management*, United Press
- ❖ Singh R.B – *Risk Assessment and Vulnerability analysis.*

## DSE-6.3 : URBAN GEOGRAPHY

**Full Marks – 100**  
**Mid Sem – 15/1hr**  
**End Sem Theory – 60/3 hrs**  
**End Sem Practical – 25/3 hrs**

### **THEORY**

#### **UNIT - I:**

Urban geography: Introduction, nature and scope; history of urbanization, Trends and Patterns of Urbanization in developed, developing countries, world and India.

#### **UNIT - II:**

Functional classification of cities: Quantitative and Qualitative Methods, Christaller Theory, Morphology of Urban Settlements & Urban Sphere of Influence and umland, concept of CBD, rural-urban fringe.

**UNIT - III:**

Theories of urban growth, Urban Issues: problems of housing, slums, civic amenities (water and transport), Air Pollution and Noise Pollution,

**UNIT - IV:**

Case studies of Delhi, Mumbai, Kolkata, Bhubaneswar and Chandigarh with reference to city planning and Urban Issues.

**PRACTICAL**

1. Functional classification of towns
2. Projection of urban population
3. Delimitation of C.B.D and umland
4. Gravity and population potential model.
5. Practical Record and Viva-Voce (10 marks)

**Text books:**

1. Ramachandran R (1989): *Urbanisation and Urban Systems of India*, Oxford University Press, New Delhi

**Reading List:**

- ❖ Fyfe N. R. and Kenny J. T., 2005: *The Urban Geography Reader*, Routledge.
- ❖ Graham S. and Marvin S., 2001: *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*, Routledge.
- ❖ Hall T., 2006: *Urban Geography*, Taylor and Francis.
- ❖ Kaplan D. H., Wheeler J. O. and Holloway S. R., 2008: *Urban Geography*, John Wiley.
- ❖ Knox P. L. & McCarthy L., 2005: *Urbanization: An Introduction to Urban Geography*, Prentice Hall NY.
- ❖ Sassen S., 2001: *The Global City: New York, London and Tokyo*, Princeton University Press.
- ❖ Ramachandran R (1989): *Urbanisation and Urban Systems of India*, Oxford University Press, New Delhi
- ❖ Ramachandran, R., 1992: *The Study of Urbanisation*, Oxford University Press, Delhi
- ❖ Singh, R.B. (Eds.) (2001) *Urban Sustainability in the Context of Global Change*, Science Pub., Inc., Enfield (NH), USA and Oxford & IBH Pub., New Delhi.
- ❖ Singh, R.B. (Ed.) (2015) *Urban development, challenges, risks and resilience in Asian megacities*. *Advances in Geographical and Environmental Studies*, Springer

**DSE-6.4 : FIELD WORK AND RESEARCH METHODOLOGY**

Full Marks – 100

Mid Sem – 15/1hr

End Sem Theory – 60/3 hrs

End Sem Practical – 25/3 hrs

**THEORY**

**Aim of the Course:**

To introduce research aptitude among young geographers.

**Objectives of the Course:**

- \* To enable students to develop a general understanding of the methodology of research in geography.
- \* To strengthen the need of interdisciplinary research.
- \* To inculcate the role of Case Study analysis in the methodology of geography.
- \* To understand the value of Field Work and Primary Data in geographical research.

**UNIT - I : Fundamentals of Research Literacy**

- a) Meaning and objectives of research; types of research (Historical, Case Study, Descriptive and Experimental),
- b) Significance of Research, Ethics in Research and Plagiarism,
- c) Role and Utility of Fieldwork in Geography,
- d) Sources & Types of Data Collection (Reconnaissance, Primary & Secondary)

**UNIT - II: Approaches to Research**

- a) Approach and Methods of Geographic Research,
- b) Ex-post facto, Laboratory Experiments,
- c) Field Study and Experiments, Field Survey Research,
- d) Evaluation Research and Action Research.

**UNIT - III: Methods and Field Techniques**

- a) Field Techniques in Geography, Selection of Appropriate Technique, Observation (Participant / Non Participant),
- b) Preparation of Questionnaires and Schedules (Open / Closed / Structured / Non-Structured);

- c) Participatory Rapid Appraisal and Focus Group Discussion
- d) Content Analysis

**UNIT - IV: Preparation of a Research Report**

- a) Designing the Research Report (Documentation Structure, Layout, Fonts, Setting of Maps, Diagrams, Tables, Appendices, Bibliography and Reference)
- b) Review of Literature and Different Methods of In-text and End of Paper Citation,
- c) Style of Citation in Science and Social Science Research (Books, Journals, Reports, Thesis, News Items, Web Sources)

**PRACTICAL**

1. Preparation of a Observation Schedule (Participant / Non Participant) and Questionnaire (Open / Closed / Structured / Non-Structured);
2. Preparation of a Guide Line for Focus Group Discussion and PRA
3. Field Testing of Questionnaire and FGD-PRA guidelines t on a village level socio-economic study.
4. Preparation of a Research Report
5. Viva Voce

**Note:**

- i. Each student will prepare an individual report based on primary and secondary data collected during field work.
- ii. Duration of the field work should not exceed one week.
- iii. The word count of the report should be around 5000 excluding figures, tables, photographs, maps, references and appendices.
- iv. One copy of the report on A4 size paper should be submitted in soft binding.

**Main Books:**

1. Majid Hussain (1994), Methodology of Geography, Anmol Publication, New Delhi.
2. K.L. Narasimha Murthy (1999), Geographical Research, Concept Publishing Company, New Delhi

**Reference Books:**

- ❖ Research Methodology - Methods and Techniques, Revised Edited by C.R. Kothari (2004), New Age International Publishers, New Delhi.
- ❖ Quantitative Social Research Methods by Kultar Singh (2007), Sage Publication.
- ❖ Social Survey Methods by Paul Nicholas (2009), Oxfarm Publishers Delhi.

**OR**

**DSE-6.4 : DISSERTATION / PROJECT WORK**

**Full Marks – 100**  
**End Sem Project– 100**

A project report may be given in view of discipline specific papers. It is considered as a special course involving application of knowledge solving and exploring a real life situation and difficult problem.

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