

COURSES OF STUDIES

FOR

THREE YEAR DEGREE COURSE

IN

ARTS HONOURS

GEOGRAPHY

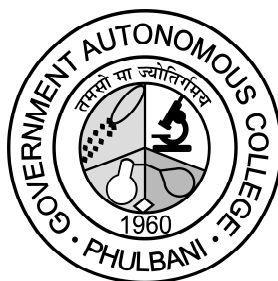
STUDENT COPY

Choice Based Credit System(CBCS)

First & Second Semester Examination – 2018-19

Third & Fourth Semester Examination – 2019-20

Fifth & Sixth Semester Examination – 2020-21



**GOVERNMENT AUTONOMOUS COLLEGE,
PHULBANI, KANDHAMAL**

SYLLABI FOR CBCS COURSE

Sem	CORE COURSE (14)	Ability Enhancement Compulsory Course (AECC) (2)	Skill based Enhancement Compulsory Course (SECC) (2)	Elective: Discipline Specific DSE (4)	Elective: Generic (GE) (4)
I	CORE-I	AECC-1			GE-1 (Minor-1)
	CORE-II				
II	CORE-III	AECC-2			GE-1 (Minor-2)
	CORE -IV				
III	CORE-V		SECC-1		GE-2 (Minor-1)
	CORE-VI				
	CORE-VII				
IV	CORE-VIII		SECC-2		GE-2 (Minor-2)
	CORE-IX				
	CORE-X				
V	CORE-XI			DSE-1	
	CORE-XII			DSE-2	
VI	CORE-XIII			DSE-3	
	CORE-XIV			DSE-4 (Project)	

SECC-1 : To be offered by English Department.

SECC-2 : To be offered by Mathematics Department.

GE : Minor-1 and Minor-2 is to be decided by the college Based on Subject.

QUESTION PATTERN FOR MID SEM

Mid Semester Examination	Full Marks	No. of Short Answer type Questions (2 marks each) (Compulsory)	No. of Long Answer type Questions (8 marks each)	No. of Long Answer type Questions (12 marks each)
Practical Subject	20	6	1	*
Non-Practical Subject	20	4	*	1

QUESTION PATTERN FOR END SEM

End Semester Examination	Full Marks	GROUP – A					GROUP - B									
		No. of Short Answer type Questions (2 marks each) (Compulsory)					No. of Long Answer type Questions (8 marks each)					No. of Long Answer type Questions (12 marks each)				
Units -->		I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V
Non-Practical Subject	80	10					*	*	*	*	*	1	1	1	1	1
Practical Subject	50	5					1	1	1	1	1	*	*	*	*	*

- ❖ There is no alternative questions (choice) in Group-A questions (Short Answer type questions). All questions are compulsory.
- ❖ There is internal alternative questions (choice) in each number in Group-B questions (Long Answer type questions). Examinee has to answer one questions out of two alternative questions from each number.
- ❖ There is little deviation in question pattern of AECC (Eng Communication) & SECC-I & II. Details regarding question pattern of concerned subject is given at appropriate place.)
- ❖ The duration of Mid Sem exam of each paper is 1 hour irrespective of Full marks.
- ❖ The duration of End Sem exam of each paper is 3 hours for 80 marks/50 marks.

YEAR & SEMESTER-WISE PAPERS & CREDITS AT A GLANCE

Three-Year (6-Semester) CBCS Programme (B.Sc. Hons.) (Geography Hons.)				
Yr.	Sl.No.	Course Structure	Code	Credit Points
FIRST YEAR	SEMESTER-I			
	1	Geomorphology	C-1.1	6
	2	Cartographic Techniques (Practical)	C-1.2	6
	3	Anthropology(Anthropology-I)/English(Academic Writing and Composition)/History(History of India-I)/Political Science(Indian Polity-I)	GE-1.3	4+2/6
	4	MIL Communication – Odia / English Communication	AECC-1.4	6
	TOTAL -			24
	SEMESTER-II			
	5	Climatology	C-2.1	6
	6	Thematic Cartography (Practical)	C-2.2	6
	7	Economics(Indian Economy–I)/Odia(Odia-I)/Philosophy(Systems of Indian Philosophy)	GE-2.3	6
	8	Environmental Studies	AECC-2.4	6
	TOTAL -			24
SECOND YEAR	SEMESTER-III			
	9	Environmental Geography	C-3.1	6
	10	Economic Geography	C-3.2	6
	11	Field Work and Research Methodology (Practical)	C-3.3	6
	12	Anthropology(Anthropology-II)/English(Language, Literature and Culture)/History(History of India-II)/Political Science(Indian Polity-II)	GE-3.4	4+2/6
	13	Communicative English	SECC-3.5	6
	TOTAL -			30
	SEMESTER-IV			
	14	Evolution of Geographical Thought	C-4.1	6
	15	Human Geography	C-4.2	6
	16	Statistical Methods in Geography (Practical)	C-4.3	6
	17	Economics(Indian Economy–II)/Odia(Odia-II)/Philosophy(Indian Ethics)	GE-4.4	6
	18	Quantitative and Logical Thinking	SECC-4.5	6
	TOTAL -			30
FINAL YEAR	SEMESTER-V			
	19	Geography of India	C-5.1	6
	20	Remote Sensing and GIS (Practical)	C-5.2	6
	21	Population Geography	DSE-5.3	6
	22	Hydrology and Oceanography	DSE-5.4	6
	TOTAL -			24
	SEMESTER-VI			
	23	Regional Planning and Development	C-6.1	6
	24	Disaster Management based Project Work (Practical)	C-6.2	6
	25	Urban Geography	DSE-6.3	6
	26	Project Work	DSE-6.4	6
	TOTAL -			24
GRAND TOTAL -			156	

Notes:

- C- Core Course
- GE- Generic Elective Course
- DSE- Discipline Specific Elective Course
- AECC- Ability Enhancement Compulsory Course
- SECC- Skill based 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 – 20/1 hr
End Sem – 80/3 hrs

UNIT-I :

Geomorphology: Nature and Scope.

UNIT-II :

Earth: Interior Structure and Isostasy.

UNIT-III :

Earth Movements: Plate Tectonics, Types of Folds and Faults, Earthquakes and Volcanoes.

UNIT-IV :

Geomorphic Processes: Weathering, Mass Wasting, Cycle of Erosion (Davis and Penck).

UNIT-V :

Landforms formed by Running water, Glacier, Underground Water, Wind

Suggested Readings :

1. Bloom A. L., 2003: *Geomorphology: A Systematic Analysis of Late Cenozoic Landforms*, Prentice-Hall of India, New Delhi.
2. Bridges E. M., 1990: *World Geomorphology*, Cambridge University Press, Cambridge.
3. Christopherson, Robert W., (2011), *Geosystems: An Introduction to Physical Geography*, 8 Ed., Macmillan Publishing Company
4. Kale V. S. and Gupta A., 2001: *Introduction to Geomorphology*, Orient Longman, Hyderabad.
5. Knighton A. D., 1984: *Fluvial Forms and Processes*, Edward Arnold Publishers, London.
6. Richards K. S., 1982: *Rivers: Form and Processes in Alluvial Channels*, Methuen, London.
7. Selby, M.J., (2005), *Earth's Changing Surface*, Indian Edition, OUP
8. Skinner, Brian J. and Stephen C. Porter (2000), *The Dynamic Earth: An Introduction to physical Geology*, 4th Edition, John Wiley and Sons
9. Thornbury W. D., 1968: *Principles of Geomorphology*, Wiley.
10. Wooldridge W. S. and Morgan R. S., 1959: *An Outline of Geomorphology: The*

C-1.2 : CARTOGRAPHIC TECHNIQUES (PRACTICAL)

Full Marks - 100
End Sem Practical – 100/6 hrs

UNIT-I :

Cartography – Nature and Scope.

UNIT-II :

Scales – Concept and application; Graphical Construction of Plain, Comparative and Diagonal Scales.

UNIT-III :

Map Projections – Classification, Properties and Uses; Graphical Construction of Polar Zenithal Stereographic, Gnomonic, Orthographic Projection, Simple Cylindrical & Cylindrical equal area Projection, Conical Projection, Cone standard & Two standard parallel)

UNIT-IV :

Topographical Map – Interpretation of a Mountain area with the help of Cross and Longitudinal Profiles.

UNIT-V :

Slope Analysis – Wentworth's method.

Practical Record: A Project File in pencil, comprising one exercise *each*, on scale, map projection, interpretation of topographic sheet and slope analysis.

Suggested Readings :

1. Anson R. and Ormelling F. J., 1994: *International Cartographic Association: Basic Cartographic Vol.* Pregmen Press.
2. Gupta K.K. and Tyagi, V. C., 1992: *Working with Map*, Survey of India, DST, New Delhi.
3. Loxton J., 1980: *Practical Map Production*, John Wiley.
4. Mishra R.P. and Ramesh, A., 1989: *Fundamentals of Cartography*, Concept, New Delhi.
5. Monkhouse F. J. and Wilkinson H. R., 1973: *Maps and Diagrams*, Methuen, London.
6. Rhind D. W. and Taylor D. R. F., (eds.), 1989: *Cartography: Past, Present and Future*, Elsevier, International Cartographic Association.
7. Robinson A. H., 2009: *Elements of Cartography*, John Wiley and Sons, New York.

8. Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers, Meerut.
9. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers.
10. Steers J. A., 1965: *An Introduction to the Study of Map Projections*, London.

GE-1.3 : ANTHROPOLOGY-I

Full Marks-100

Mid Sem-20/1hr

End Sem Theory-50/3hr

UNIT- I

Anthropology – Nature of the subject, Historical development of the discipline, Sub-disciplines within Anthropology. Relation with other disciplines- History, Political Science, Sociology, Psychology, Economics, Biology, Geology.

UNIT- II

Aim and Scope of Social and Cultural Anthropology, Meaning and Definition of Family; Types, feature and function of Family, Meaning and Definition of Marriage; Types of Marriage, Rules of Marriage, Kinship, Kinship Behavior, Lineage, Clan, Descent.

UNIT- III

Concepts of society and culture; status and role; groups and institution,

UNIT- IV

Definition and Scope of Physical Anthropology, Branches of Physical Anthropology, Man's place in animal kingdom, Anatomical difference between Ape and Man. Major theories of Organic Evolution- Lamarckism, Darwinism, Neo-Darwinism.

UNIT- V

Definition and Scope of Archaeological Anthropology; Relationship with other disciplines, Concept of dating: Relative dating – (Study of Stratigraphy, Pollen Analysis, Palaeontology); Absolute dating – (Radiocarbon method, Potassium – Argon method; Thermoluminescence method); Stone Tool types and techniques of tool manufacture.

PRACTICAL

End Sem Practical – 30/3 hrs

1. **Somatometry**
 - a. Stature
 - b. Sitting height
 - c. Body weight
 - d. Maximum head length
 - e. Maximum head breadth
 - f. Head circumference
 - g. Minimum frontal breadth
 - h. Maximum bizygomatic breadth
 - i. Bigonial breadth
 - j. Nasal length
 - k. Nasal breadth
 - l. Nasal height
2. Typo-technological Analysis of Prehistoric Tools: Identification, Interpretation and Drawings of the tool Types
 - a. Core Tool Types
 - b. Flake Tool Types
 - c. Neolithic Tool Type

Suggested Readings :

1. Agarwal, D. P. 1984, *Archaeology of India*. New Delhi: Select Book Services Syndicate.
2. Bhattacharya D.K. (1979). *Old Stone Age Tools and Techniques*. Calcutta, K.P. Bagchi Company
3. Bhattacharya, D. K. 1990, *An Introduction to Prehistoric Archaeology*. Delhi; Hindustan Publishing Corporation
4. Bhattacharya, D. K. 2001. *An Outline of Indian Prehistory*. Delhi: Palaka Prakashan.
5. Carter, J. and B.H. Heath. 1990. *Somatotyping – Development and Application*. Cambridge University Press, Cambridge.
6. Das, B.M. and R. Deka. 1998. *Physical Anthropology Practical*. Kitab Mahal, Allahabad.
7. Ember C. R. et al. (2011). *Anthropology*. New Delhi: Dorling Kindersley
8. Haviland, Prins, Walrath, McBride (2007). *Introduction to Anthropology*. Cengage Learning India Pvt. Ltd., New Delhi
9. Rammi Reddy, V. 1987, *Elements of Prehistory*. New Delhi: Mittal Publications.
10. Sankalia H.D. (1964). *Stone Age Tools*. Poona Deccan College

11. Singh I.P. and M.K. Bhasin. 1989. *A Laboratory Manual on Biological Anthropology: Anthropometry*. Kamal-Raj Enterprises, Delhi.
12. Weiner J.S. and J.A. Lourie. 1981. *Practical Human Biology*. Academic Press, New York.

GE-1.3 : ACADEMIC WRITING AND COMPOSITION

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3hrs

UNIT-I : Instruments of Writing I

- Vocabulary development : synonyms and antonyms; words used as different parts of speech; vocabulary typical to 'science' and 'commerce'
- Collocation ; effective use of vocabulary in context

UNIT-II : Instruments of Writing II

- Syntax : word order; subject-predicate; subject-verb agreement; simple complex, compound, compound-complex sentences; structure and uses of active and passive sentences
- Common errors in Indian writing

UNIT-III : Academic Writing I

- What is academic writing?
- The formal academic writing process : the 'what' and the 'how' or writing; use of cohesive and transitional devices in short and extended pieces of writing

UNIT-IV : Academic Writing II

- Paragraph writing : topic sentence, appropriate paragraph development ; expository, descriptive, narrative and argumentative paragraphs
- Extended pieces of writing : process development using comparison-contrast, cause and effect, argumentation and persuasion

UNIT-V : Research writing : Writing research papers and projects

- Mechanics of research writing; principles of citation; summarizing and paraphrasing
- Identifying a potential research topic; preparing a synopsis; literature review; data collection and analysis; deriving conclusions from analysis

Pattern of Examination :

Mid-Semester Examination :

Using texts (500-600 words), students will be tested for

- Vocabulary : synonyms, antonyms, words used as different parts of speech = 10 marks
- Word order ; subject-predicate; subject-verb agreement = 10 marks

End-Semester Examination :

Using texts (600-700 words), students will be tested for

- Use of vocabulary in context 2 marks X 5 bits = 10 marks
- Use of grammar in context
- Use of cohesive and transitional devices in one paragraph 2 marks X 10 bits = 20 marks
- Writing two paragraphs (expository/descriptive/narrative/Argumentative) using topic sentences 10 marks X 2 qns = 20 marks
- Correcting in-text citation from given input 2 marks X 5 bits = 10 marks
- Preparing a correct version of Works Cited page from given input 2 marks X 5 bits = 10 marks

Suggested Readings:

1. K. Samantray, *Academic and Research Writing : A Course for Undergraduates*, Orient BlackSwan
2. Leo Jones (1998) *Cambridge Advanced English : Student's Book*, New Delhi : CUP
3. Stanley Fish (2011) *How to Write a Sentence*

GE-1.3 : HISTORY OF INDIA-I

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3 hrs

UNIT-I : Reconstructing Ancient Indian History

- (a) Meaning and relevance of History
- (b) Sources for the reconstruction of Ancient Indian History

UNIT-II : Pre-historic hunter-gatherers

- (a) Paleolithic cultures- sequence, distribution, technological developments
- (b) Mesolithic cultures- distribution, new development in technology

UNIT-III : Beginning of Agriculture

- (a) Neolithic and Chalcolithic Cultures;
- (b) Regional and Chronological distribution, subsistence and pattern of exchange

UNIT-IV : The Harappan civilization

- (a) Origin, Town planning, Social and Political organisation
- (b) Religious beliefs and practices, Arts, Decline

UNIT-V : Cultures in Transition

- (a) Early Vedic and Later Vedic Culture: Society, Economy, Political System, Religion and Philosophy
- (b) Tamilakam – Sangam Age

Suggested Readings :

1. R.S. Sharma, India's Ancient Past, New Delhi, OUP, 2007
2. R.S. Sharma, Material Culture and Social Formations in Ancient India, 1983.
3. D.P. Agrawal, The Archaeology of India, 1985.
4. A.L. Basham, The Wonder that Was India, 1971.
5. Upinder Singh, A History of Ancient and Early Medieval India, 2008.
6. Romila Thapar, Early India from the beginning to 1500, 2002.

GE-1.3 : INDIAN POLITY - I

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

UNIT-I: Landmarks of Freedom Movement Preamble & salient features

UNIT-II: Fundamental Rights, Directive principles of state policy

UNIT-III: Union Government

President, Prime Minister, Council of Ministers, Union Parliament & Supreme Court of India

UNIT-IV: State Government

Governor, Chief Minister, Vidhan Sabha

UNIT-V: Local Government

Panchayati Raj & Urban local bodies

Suggested Readings :

1. Basu, D.D. (2012) *Introduction to the Constitution of India*, New Delhi: Lexis Nexis.
2. Kashyap, Subhash Chandra (2013) '*Our Political System*' New Delhi: National Book Trust
3. Laxmikanth, M (2015) '*Indian Polity*' New Delhi: Tata McGraw Hill
4. Raghunandan, J. R (2012) *Decentralization and local governments: The Indian Experience*, New Delhi: Orient Black Swan

AECC-1.4 : ଯୋଗାଯୋଗମୂଳକ ମାତୃଭାଷା- ଓଡ଼ିଆ

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

ଯୁନିଟ୍-୧ : ବିଜ୍ଞାପନ କଳା ଓ ସାହିତ୍ୟ / ବିଜ୍ଞାପନର ଆବଶ୍ୟକତା ଓ ଉପକାରिता

ଯୁନିଟ୍-୨ : ଗଜ- କୃଷ୍ଣଚୂଡ଼ା- ସୁରେନ୍ଦ୍ର ମହାନ୍ତି
ପାଟଦେଇ- ବୀଣାପାଣି ମହାନ୍ତି
ବୁଢ଼ାଶଙ୍ଖାରୀ- ଲକ୍ଷ୍ମୀକାନ୍ତ ମହାପାତ୍ର

ଯୁନିଟ୍-୩ : କବିତା- ଶ୍ରୀରାଧା- ରମାକାନ୍ତ ରଥ
ପ୍ରତିମା ନାୟକ- ସଚ୍ଚି ରାଉତରାୟ
ଦୁର୍ଯ୍ୟୋଧନ- ସୀତାକାନ୍ତ ମହାପାତ୍ର

ୟୁନିଟ୍-୪ : ପ୍ରବନ୍ଧ- ଗାଡ଼ି ଛାଡ଼ିଦେଲା – ଚନ୍ଦ୍ରଶେଖର ରଥ
ଆମେରିକାରେ ଲୋକଚରିତ୍ର – ଗୋଲୋକ ବିହାରୀ ଧଳ
ସ୍ୱାଧୀନ ଚିନ୍ତା – ବିଶ୍ୱନାଥ କର

ୟୁନିଟ୍-୫ : କାରକ ଓ ବିଭକ୍ତି

ପୁସ୍ତକ :

୧. ଯୋଗାଯୋଗର ଭାଷା, ଫ୍ରେଣ୍ଡ୍‌ସ୍ ପ୍ରକାଶନ, କଟକ
୨. ଗନ୍ଧ, କବିତା ଓ ପ୍ରବନ୍ଧ – ସଂକଳିତ ପୁସ୍ତକ, କଲେଜ ଛକ, ପୁଲବାଣୀ

AEEC-1.4 : ENGLISH COMMUNICATION

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

UNIT-I : Introduction

1. What is communication?
2. Types of communication
 - Horizontal
 - Vertical
 - Interpersonal
 - Grapevine

UNIT-II : Language of Communication

1. Verbal : spoken and written
2. Non-verbal
 - Proxemics
 - Kinesics
 - Haptics
 - Chronemics
 - Paralinguistics
3. Barriers to communication
4. Communicative English

UNIT-III : Reading Comprehension (Prose & Poetry)

- Locate and remember the most important points in the reading
- Interpret and evaluate events, ideas and information
- Read “between the lines” to understand underlying meanings
- Connect information to what they already know

UNIT-IV : Writing

- Expanding an Idea
 - Note Making
 - Information Transfer
 - Writing a Memo
 - Writing Formal Email
 - Writing a Business Letter
 - Letters to the Editor
 - CV & Resume Writing
 - Covering Letter
 - Report Writing
 - News Story
 - Interviewing for newspaper
- (The above mentioned writing activities are covered in the prescribed text book Vistas and Visions)

UNIT-V : Language functions in listening and conversation

1. Discussion on a given topic in pairs
2. Speaking on a given topic individually
3. Group Discussion

4. Interview
 5. Dialogue
- (Practice to be given using the set pieces from the prescribed textbook)

Grammar and Usage :

1. Phrasal verbs
2. Collocation
3. Using Modals
4. Use of Prepositions
5. Common Errors in English Usage

(The above mentioned grammar items are covered in the prescribed text book *Vistas and Visions*)

Book Prescribed :

1. *Vistas and Visions: An Anthology of Prose and Poetry*. (Ed.) Kalyani Samantray, Himansu S. Mohapatra, Jatindra K. Nayak, Gopa Ranjan Mishra, Arun Kumar Mohanty. OBS

Texts to be studied

Prose

1. Decoding Newspapers
2. The Gold Frame
3. Of Truth
4. Lifestyle English
5. A Cup of Tea

Poetry

1. Lines Composed a few miles above Tintern Abbey
2. Sonnet 46 (Shakespeare)
3. Pigeons
4. Miracles

All grammar and writing activities in the textbook *Vistas and Visions*

Pattern of Examination :

Each reading and writing question will invite a 200 words response.

Mid-Semester Examination :

Unit I : Preferably short questions on types of communication = 20 marks

End-Semester Examination :

Unit II : One long question with choice 1 mark X 10 qns = 10 marks

Two short notes with choice 2 marks X 5 qns = 10 marks

Unit III : Reading skills (2 qns from prose & 2 qns from poetry) 4 marks X 5 qns = 20 marks

Unit IV : Writing 2 marks X 10 qns = 20 marks

Unit V : Grammar & Usage 2 marks X 10 qns = 20 marks

Grammar questions must be set in contexts; not as isolated sentences as used for practice in the prescribed text book.

Suggested Readings:

1. *Fluency in English – Part II*, OUP, 2006
2. *Business English*, Pearson, 2008
3. *Communicative English* -E. Suresh Kumar and P. Sreehari
4. *Break Free : Unlock the Powerful Communicator in You*. Rajesh, V. Rupa, 2015
5. *Soft Skills* Shalini Verma, 2009
6. *Language, Literature and Creativity*, Orient BlackSwan, 2013
7. *Language through Literature*. (forthcoming) ed. Gauri Mishra, Dr. Ranajan Kaul, Dr. Brati Biswas

SEMESTER-II

C-2.1 : CLIMATOLOGY

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

UNIT-I :

Atmospheric Composition and Structure – Variation with Altitude, Latitude and Season.

UNIT-II :

Insolation and Temperature – Factors and Distribution, Heat Budget, Temperature Inversion.

UNIT-III :

Atmospheric Pressure and Winds – Planetary Winds, Forces affecting Winds, General Circulation, Jet Streams.

UNIT-IV :

Atmospheric Moisture – Evaporation, Humidity, Condensation, Fog and Clouds, Precipitation Types, Stability and Instability.

UNIT-V :

Cyclones – Tropical Cyclones, Extra Tropical Cyclones, Monsoon - Origin and Mechanism.

Suggested Readings :

1. Anthes R. A., Panofsky H. A., Cahir J. J. and Rango A., 1978: *The Atmosphere*, Columbus.
2. Barry R. G. and Carleton A. M., 2001: *Synoptic and Dynamic Climatology*, Routledge, UK.
3. Barry R. G. and Corley R. J., 1998: *Atmosphere, Weather and Climate*, Routledge, New York.
4. Batten L. J., 1979: *Fundamentals of Meteorology*, Prentice-Hall Inc., Englewood Cliffs, New Jersey.
5. Boucher K., 1975: *Global Climates*, Halstead Press, New York.
6. Critchfield H. J., 1987: *General Climatology*, Prentice-Hall of India, New Delhi
7. Lutgens F. K., Tarbuck E. J. and Tasa D., 2009: *The Atmosphere: An Introduction to Meteorology*, Prentice-Hall, Englewood Cliffs, New Jersey.
8. Oliver J. E. and Hidore J. J., 2002: *Climatology: An Atmospheric Science*, Pearson Education, New Delhi.
9. Thompson D. R. and Perry A. (eds.), 1997: *Applied Climatology: Principles and Practice*, Routledge, USA and Canada.
10. Trewartha G. T. and Horne L. H., 1980: *An Introduction to Climate*, McGraw-Hill.

C-2.2 : THEMATIC CARTOGRAPHY (PRACTICAL)

Full Marks - 100
End Sem Practical – 100/6 hrs

UNIT-I :

Maps – Classification and Types; Principles of Map Design.

UNIT-II :

Diagrammatic Data Presentation – Line, Bar and Circle.

UNIT-III :

Thematic Mapping Techniques – Properties, Uses and Limitations; Areal Data -- Choropleth, Dot, Proportional Circles; Point Data – Isopleths.

UNIT-IV :

Cartographic Overlays – Point, Line and Areal Data.

UNIT-V :

Climograph, Hythergraph, Ergograph

Practical Record: A Thematic Atlas with ink should be prepared on a specific theme with five plates of any state in India.

Suggested Readings :

1. Cuff J. D. and Mattson M. T., 1982: *Thematic Maps: Their Design and Production*, Methuen Young Books
2. Dent B. D., Torguson J. S., and Holder T. W., 2008: *Cartography: Thematic Map Design* (6th Edition), McGraw-Hill Higher Education
3. Gupta K. K. and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, New Delhi.
4. Kraak M.-J. and Ormeling F., 2003: *Cartography: Visualization of Geo-Spatial Data*, Prentice-Hall.
5. Mishra R. P. and Ramesh A., 1989: *Fundamentals of Cartography*, Concept, New Delhi.
6. Monkhouse F. J. and Wilkinson H. R., 1973: *Maps and Diagrams*, Methuen, London.

7. Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers, Meerut.
8. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers.
9. Slocum T. A., McMaster R. B. and Kessler F. C., 2008: *Thematic Cartography and Geovisualization* (3rd Edition), Prentice Hall.
10. Tyner J. A., 2010: *Principles of Map Design*, The Guilford Press.

GE-2.3: INDIAN ECONOMY - I

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3 hrs

UNIT-I : Introduction to Indian Economy

British Rule: exploitation and under development in India; features of Indian economy – natural resources, infrastructure, population

UNIT-II : Population and Human Development

Demographic trends and issues; education; health and malnutrition

UNIT-III : National Income in India

National income: trends, sectoral composition;

UNIT-IV : Economic Planning in India & Recent Changes

Economic planning: Planning Commission and its functions, Planning exercises in India, Objectives, Strategies and achievements, NITI Ayog

UNIT-V : Current Challenges

Poverty: definition and estimate, poverty line, poverty alleviation programs; Inequality: income and regional inequality – causes and corrective measures; Unemployment: concepts, measurement, types, causes and remedies; Environmental challenges: Land, water and air

Suggested Books:

1. U. Kapila (2010): *Indian economy since Independence*. Academic Foundation, New Delhi
2. S. K. Misra and V. K. Puri (Latest Year): *Indian Economy — Its Development Experience*, Himalaya Publishing House, Mumbai
3. S. Chakraborty: *Development Planning: The Indian Experience*. Clarendon Press.
4. R. Dutt and K. P. M, Sundharam (Latest Year): *Indian Economy*, S. Chand & Company Ltd., New Delhi.
5. A. Panagariya (2008): *India: the Emerging Giant*, Oxford University Press, New York
6. S. Acharya and R. Mohan (Eds.) (2010): *India's Economy: Performance and Challenges*, Oxford University Press, New Delhi.
7. I. J. Ahluwalia and I. M. D. Little (Eds.) (1998): *India's Economic Reforms and Development: Essays for Manmohan Singh*, Oxford University Press, New Delhi.

GE-2.3 : ଓଡ଼ିଆ (ପ୍ରଥମ ପତ୍ର)

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3 hrs

ୟୁନିଟ୍-୧ : କୃଦନ୍ତ, ତତ୍ତ୍ୱ, ସମୋଜାରିତ ଶବ୍ଦ, ଏକପଦାକରଣ

୧୭

ୟୁନିଟ୍-୨ : କବିତା- ସମୁଦ୍ର କନ୍ୟା- ଭାନୁଜାରାଓ

କୁରୁଜା ପାଇଁ ଗୋଟିଏ ସଙ୍ଗୀତ- ସାତାକାନ୍ତ ମହାପାତ୍ର

ଜହ୍ନରାତି- ଦେବଦାସ ଛୋଟରାୟ

୧୭

ୟୁନିଟ୍-୩ : ପ୍ରବନ୍ଧ- ପ୍ରତିବେଶୀ- ଚନ୍ଦ୍ରଶେଖର ରଥ

ଓଡ଼ିଆ ଓ ଓଡ଼ିଶା- ଚିତ୍ତରଞ୍ଜନ ଦାସ

ସମାଜର ରୀତି ନୀତି ପରିବର୍ତ୍ତନ- ଫକୀର ମୋହନ ସେନାପତି

୧୭

ୟୁନିଟ୍-୪ : ଗନ୍ଧର୍ବ- ଡିମିରିପୁଲ- ଅଭିଳାଷୀମାନଙ୍କ ପଦନାୟକ

ଲକ୍ଷ୍ମୀର ଅଭିସାର- ମନୋଜ ଦାସ

ମାଂସର ବିଳାପ- କାଳିନ୍ଦୀ ଚରଣ ପାଣିଗ୍ରାହୀ

୧୭

ୟୁନିଟ୍-୫ : ଅନୁବାଦର ସଂଜ୍ଞା, ସ୍ୱରୂପ ଓ ପ୍ରକାରଭେଦ

୧୭

ପୁସ୍ତକ :

୧. ସର୍ବସାର ବ୍ୟାକରଣ

୨. ବ୍ୟବହାରିକ ବ୍ୟାକରଣ

୩. ଗନ୍ଧର୍ବ, କବିତା ଓ ପ୍ରବନ୍ଧ - ସଂକଳିତ ପୁସ୍ତକ, କଲେଜ ଛକ, ପୁଲବାଣୀ

GE-2.3 : SYSTEMS OF INDIAN PHILOSOPHY

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3 hr

UNIT-I:

Carvaka Materialism;

Jainism: *Syadvada*; and *Anekantavada*

UNIT-II:

Buddhism: The Noble Truths; Doctrine of Dependent Origination; Doctrine of Momentariness

UNIT-III:

Samkhya: *Purusa*; and *Prakriti*

Yoga: *Cittavrtti* and Its *Nirodha*; *Astangika Marga*

UNIT-IV:

Nyaya: *Pramanas* (Perception and Inference)

Vaisesika: *Padarthas*

UNIT-V:

Samkhya and Ramanuja: Brahman, Atman, *Jagat* and *Maya*

Basic Study Materials :

1. S.C. Chatterji and D.M. Datta, *An Introduction to Indian Philosophy*
2. C.D. Sharma, *A Critical Survey of Indian Philosophy*
3. M. Hiriyanna, *Outlines of Indian Philosophy*
4. R.K. Puligandla, *Fundamentals of Indian Philosophy*
5. S. Radhakrishnan, *Indian Philosophy*, Volumes I and II

AECC-2.4 : ENVIRONMENTAL STUDIES

Full Marks –100

Mid Sem – 20/1 hr

End Sem– 80/3hrs

UNIT-I :

Concept of environment : Ecology; Ecosystem; types and components of the ecosystem. Ecological adaptations of plants and animals

UNIT-II :

Functional aspects of ecosystem : Trophic level, food chain, food web, energy flow in the ecosystem, ecological pyramids, Biogeochemical cycles: Water cycle and Nitrogen cycle

UNIT-III :

Environmental Pollution : Source, causes and concept of air, water, noise, soil, pollution, Sewage & Sewage treatment, green house effect, Acid rain, Ozone layer depletion

UNIT-IV :

Conservation of Natural Resources : Resources, renewable & non renewable resources; soil, soil erosion and its conservation; Forest, deforestation; afforestation, conservation of Forest

UNIT-V :

Biodiversity and its Conservation : Introduction, Definition : genetic species and ecosystem diversity, value of biodiversity; consumptive use, productive use, social, ethical and aesthetic values, Biodiversity at global, national and local level, conservation of Biodiversity:- In situ and Ex-situ conservation, Bio-Geographic classification of India

Suggested Readings :

1. Shukla, R.S and Chandel, P.S : Plant Ecology and soil science, S. Chand & Company Ltd, New Delhi
2. Sharma, P.D. : Ecology and Environment, Rastogi Publication, Meerut.
3. Singh, J.S. Singh, S.P and Gupta, R.S (2006). Environmental Science, Kalyani Publishers, New Delhi

SEMESTER-III

C-3.1 : ENVIRONMENTAL GEOGRAPHY

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3 hrs

UNIT-I :

Environmental Geography – Concept and Scope

UNIT-II :

Human-Environment Relationships – Historical Progression, Adaptation

UNIT-III :

Ecosystem – Concept, Structure and Functions

UNIT-IV :

Environmental Problems in Tropical, Temperate and Polar Ecosystems

UNIT-V :

Environmental Programmes and Policies – Global, National and Local levels

Suggested Readings :

1. Chandna R. C., 2002: *Environmental Geography*, Kalyani, Ludhiana.
2. Cunningham W. P. and Cunningham M. A., 2004: *Principals of Environmental Science: Inquiry and Applications*, Tata Macgraw Hill, New Delhi.
3. Goudie A., 2001: *The Nature of the Environment*, Blackwell, Oxford.
4. Miller G. T., 2004: *Environmental Science: Working with the Earth*, Thomson Brooks Cole, Singapore.
5. MoEF, 2006: *National Environmental Policy-2006*, Ministry of Environment and Forests, Government of India.
6. Odum, E. P. et al, 2005: *Fundamentals of Ecology*, Ceneage Learning India.
7. Singh S., 1997: *Environmental Geography*, Prayag Pustak Bhawan. Allahabad.
8. UNEP, 2007: *Global Environment Outlook: GEO4: Environment For Development*, United Nations Environment Programme.

C-3.2 : ECONOMIC GEOGRAPHY

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3 hrs

UNIT-I :

Introduction: Concept and classification of economic activity

UNIT-II :

Factors Affecting location of Economic Activity with special reference to Agriculture, Industry and Services (Weber's theory*)

UNIT-III :

Primary Activities: Subsistence and Commercial agriculture, forestry, fishing and mining.

UNIT-IV :

Secondary Activities: Manufacturing (Cotton Textile, Iron and Steel), Concept of Manufacturing Regions, Special Economic Zones and Technology Parks.

UNIT-V :

Tertiary Activities: Transport, Trade and Services.

* (theories relating to agriculture and services have been dealt in other papers)

Suggested Readings :

1. Alexander J. W., 1963: *Economic Geography*, Prentice-Hall Inc., Englewood Cliffs, New Jersey.
2. Coe N. M., Kelly P. F. and Yeung H. W., 2007: *Economic Geography: A Contemporary Introduction*, Wiley-Blackwell.
3. Hodder B. W. and Lee Roger, 1974: *Economic Geography*, Taylor and Francis.
4. Combes P., Mayer T. and Thisse J. F., 2008: *Economic Geography: The Integration of Regions and Nations*, Princeton University Press.
5. Wheeler J. O., 1998: *Economic Geography*, Wiley..
6. Durand L., 1961: *Economic Geography*, Crowell.
7. Bagchi-Sen S. and Smith H. L., 2006: *Economic Geography: Past, Present and Future*, Taylor and Francis.
8. Willington D. E., 2008: *Economic Geography*, Husband Press.
9. Clark, Gordon L.; Feldman, M.P. and Gertler, M.S., eds. 2000: *The Oxford Handbook of Economic Geography*, Oxford University Press, Oxford and New York.

C-3.3 : FIELD WORK AND RESEARCH METHODOLOGY (PRACTICAL)

Full Marks - 100

End Sem Practical – 100/6 hrs

UNIT-I :

Field Work In Geographical Studies – Role, Value and Ethics of Field-Work

UNIT-II :

Defining the Field and Identifying the Case Study – Rural / Urban / Physical / Human /Environmental.

UNIT-III :

Field Techniques – Merits, Demerits and Selection of the Appropriate Technique; Observation (Participant / Non Participant), Questionnaires (Open/ Closed / Structured / Non-Structured); Interview with Special Focus on Focused Group Discussions; Space Survey (Transects and Quadrants, Constructing a Sketch)

UNIT-IV :

Use of Field Tools – Collection of Material for Physical and Socio-Economic Surveys.

UNIT-V :

Designing the Field Report – Aims and Objectives, Methodology, Analysis, Interpretation and Writing the Report.

Practical Record

1. Each student will prepare an individual report based on primary and secondary data collected during field work.
2. The students / teachers can opt to take students in or outside the NCR, depending upon, problem to be studied.
3. The duration of the field work should not exceed 10 days.
4. The word count of the report should be about **8000 to 12,000** excluding figures, tables, photographs, maps, references and appendices.
5. One copy of the report on A 4 size paper should be submitted in soft binding.

Suggested Readings :

1. Creswell J., 1994: *Research Design: Qualitative and Quantitative Approaches* Sage Publications.
2. Dikshit, R. D. 2003. *The Art and Science of Geography: Integrated Readings*. Prentice-Hall of India, New Delhi.
3. Evans M., 1988: "Participant Observation: The Researcher as Research Tool" in *Qualitative Methods in Human Geography*, eds. J. Eyles and D. Smith, Polity.
4. Mukherjee, Neela 1993. *Participatory Rural Appraisal: Methodology and Application*. Concept Pubs. Co., New Delhi.
5. Mukherjee, Neela 2002. *Participatory Learning and Action: with 100 Field Methods*. Concept Pubs. Co., New Delhi
6. Special Issue on "Doing Fieldwork" *The Geographical Review* 91:1-2 (2001).

7. Stoddard R. H., 1982: *Field Techniques and Research Methods in Geography*, Kendall/Hunt.
8. Wolcott, H. 1995. *The Art of Fieldwork*. Alta Mira Press, Walnut Creek, CA.
9. Robinson A., 1998: "*Thinking Straight and Writing That Way*", in *Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioural Sciences*, eds. by F. Pryczak and R. Bruce Pryczak, Publishing: Los Angeles.

GE-3.4 : ANTHROPOLOGY-II

Full Marks - 100

Mid Sem – 20/1 hr

End Sem Theory – 50/3 hrs

UNIT- I

Concept of tribes and its problematic nature, Characteristics of tribes, Classification and distribution of tribes based on their Economy, Occupation and Religion; Racial elements among the tribes in India, Particularly Vulnerable Tribal Groups (PVTGs).

UNIT- II

Concept of Race & UNESCO Statement on Race; A comparative account of various races of the world and India.

Primate origins with special reference to Australopithecines, Homo erectus, Homo sapiens (distribution, features and their Phylogenetic relationships)

UNIT- III : PREHISTORIC ARCHAEOLOGY OF INDIA:

Palaeolithic (Kashmir valley and Peninsular India), Mesolithic and Neolithic cultures in India (characteristic features, major tool types, important regions and sites, chronology with stratigraphic evidences)

UNIT- IV

Field work tradition in Anthropology; tools and techniques of data collection: Survey method, Observation, Questionnaire, Schedule, Interview, Case study, Life history and Genealogy

UNIT- V

Origin, history and development of Anthropology in India, Basic concepts- Great tradition and little tradition, Sanskritization and Westernization, Universalization and Parochialization, Dominant caste, , Nature-Man-Spirit complex.

PRACTICAL

End Sem Practical – 30/3 hrs

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

References :

1. Jurmain R., Kilgore L., Trevathan W., Ciochon R.L. (2012). *Introduction to Physical Anthropology* Wadsworth Publ., USA
2. Haviland, Prins, Walrath, McBride (2007). *Introduction to Anthropology*. Cengage Learning India Pvt. Ltd., New Delhi
3. Haviland, Prins, Walrath, McBride (2008). *Cultural Anthropology*. Cengage Learning India Pvt. Ltd., New Delhi
4. Karen O'reilly. (2012). '*Practical Issues in Interviewing*' *Ethnographic Methods*. Abingdon: Routledge
5. Agarwal, D. P. 1984, *Archaeology of India*. New Delhi: Select Book Services Syndicate.
6. Bhattacharya, D. K. 1990, *An Introduction to Prehistoric Archaeology*. Delhi; Hindustan Publishing Corporation
7. Bhattacharya, D. K. 2001. *An Outline of Indian Prehistory*. Delhi: PalakaPrakashan.
8. Vidarthy, L.P. and Rai. *Applied Anthropology in India*.
9. Vidarthy, L.P. and B.N. Sahay . *Applied Anthropology and Development in India*. New Delhi: National Publishing House

GE-3.4 : LANGUAGE, LITERATURE AND CULTURE

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

UNIT-I : Language

Nature of language

Functions of language : transactional, informative, interactional
(use these terms under each category above : Instrumental language, Regulatory Language, Interactional Language, Personal Language, imaginative Language, Heuristic Language, Informative Language)

UNIT-II : Language and Literature I

Literature and its language

Literary terms, Figures of speech used in literature : simile, metaphor, metonymy, irony, paradox, synecdoche, oxymoron

UNIT-III : Language and Literature II

Language used in poetry, fiction and non-fiction

Text analysis

UNIT-IV : Language and culture I

Culture, its implications and interpretations

Transmission of culture through language : Culture and society

UNIT-V : Language and Culture II

Intercultural and cross-cultural communications

Analysis and applications

Suggested Readings:

1. Kalyani Samantray, *Progamatics* (E-Pathsala)
2. Bibhudendra Narayan Patnaik & Kalyani Samantray, *Cross-Cultural and Inter-cultural Communications* (E-Pathsala)
3. Brown, G & Yule, G. *Discourse Analysis*. CUP
4. Scaglia, B (ed.) *Language, Understood : Examining and Linguistics of Discourse Analysis and Studies*. Webster's Digital Service.
5. Culture and language
6. Companion to Literary Forms by Padmaja Ashok, Orient BlackSwan. 2015
7. *Literature and Language* (ed.) Loveleen Mohan, Randep Rana, Jaibir S. Hood. Orient BlackSwann.

Pattern of Examination :

Mid-Semester Examination :

Unit I : 10 marks X 2 qns = 20 marks

End-Semester Examination :

Unit II : 1 long answer question + 1 short note/analysis (14+6) = 20 marks
Unit III : 1 long answer question + 1 short note/analysis (14+6) = 20 marks
Unit IV : 1 long answer question + 1 short note/analysis (14+6) = 20 marks
Unit V : 1 long answer question + 1 short note/analysis (14+6) = 20 marks

GE-3.4 : HISTORY OF INDIA-II

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

UNIT-I : Economy and Society (300 BC to 300 AD) :

- (a) Urban growth: North India, Central India and the Deccan
- (b) Trade and Trade Routes, Coinage

UNIT-II : Changing Political Formations :

- (a) The Mauryan Empire – Expansion and administration
- (b) Kushanas – Kanishka I - achievements
- (c) Satavahanas – Gautamiputra Satakarni

UNIT-III : Towards Early Medieval India (4th century to 750AD) :

- (a) Decline of Trade, Currency, Urban Settlement
- (b) Pattern of Administration – Gupta and Vardhanas.

UNIT-IV : Religion, Philosophy (300 BC – 750 AD) :

- (a) Brahmanical tradition: Dharma, Varnashrama, Purushartha, Sanskara
- (b) Mahayana Buddhism.
- (c) Tantricism

UNIT-V : Cultural Developments :

- (a) A brief survey of literature – Sanskrit, Tamil Literature, Scientific and technical treatises
- (b) Art and Architecture : Mauryan – Stupa, Ashokan Pillar, Post Mouryan, Gandhara School of Art, Guptas – Evolution of temple Architecture

Suggested Readings :

- 1. B. D. Chattopadhyaya, The Making of Early Medieval India, 1994.
- 2. D. D. Kosambi, An Introduction to the Study of Indian History, 1975.
- 3. R.S. Sharma, Urban Decay in India, C300-C1000, Delhi, Munshiram Manohar Lal, 1987.
- 4. Romila Thapar, Asoka and the Decline of the Mauryas, 1997.
- 5. Susan Huntington, The Art of Ancient India : Buddhist, Hindu and Jain

GE-3.4 : INDIAN POLITY - II

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

UNIT-I:

Union – State Relationship, Legislative, Administrative & Financial, Recent trends in Indian federation

UNIT-II: Constitutional Agencies

Election Commission, Electoral Reforms, Finance Commission

UNIT-III: National Integration

Problems & Prospects

UNIT-IV: Challenges to Democracy

Caste, Religion, Women empowerment

UNIT-V:

Political parties & Party system in India (National & Regional)

Suggested Readings :

- 1. Basu, D.D. (2012) *Introduction to the Constitution of India*, New Delhi: Lexis Nexis.
- 2. Laxmikanth, M (2015) '*Indian Polity*' New Delhi: Tata McGraw Hill
- 3. Paul R. Brass (1999) *The Politics of India Since Independence*, Cambridge University Press
- 4. Fadia, B.L. (2017) *Indian Government and Politics*, Sahitya Bhawan Publication

SECC-3.5 : COMMUNICATIVE ENGLISH

(Enriching Linguistic Knowledge & Communication Proficiency)

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

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

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

SEMESTER-IV

C-4.1 : EVOLUTION OF GEOGRAPHICAL THOUGHT

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

UNIT-I :

Paradigms in Geography

UNIT-II :

Pre-Modern – Early Origins of Geographical Thinking with reference to the Classical and Medieval Philosophies.

UNIT-III :

Modern – Evolution of Geographical Thinking and Disciplinary Trends in Germany, France, Britain, United States of America.

UNIT-IV:

Debates – Environmental Determinism and Possibilism, Systematic and Regional, Ideographic and Nomeothetic.

UNIT-V:

Trends – Quantitative Revolution and its Impact, Behaviouralism, Systems Approach, Radicalism, Feminism; Towards Post Modernism – Changing Concept of Space in Geography, Future of Geography.

Suggested Readings :

1. Arentsen M., Stam R. and Thuijjs R., 2000: *Post-modern Approaches to Space*, ebook.
2. Bonnett A., 2008: *What is Geography?* Sage.
3. Dikshit R. D., 1997: *Geographical Thought: A Contextual History of Ideas*, Prentice-Hall India.
4. Hartshorne R., 1959: *Perspectives of Nature of Geography*, Rand MacNally and Co.
5. Holt-Jensen A., 2011: *Geography: History and Its Concepts: A Students Guide*, SAGE.
6. Johnston R. J., (Ed.): *Dictionary of Human Geography*, Routledge.

7. Johnston R. J., 1997: *Geography and Geographers, Anglo-American Human Geography since 1945*, Arnold, London.
8. Kapur A., 2001: *Indian Geography Voice of Concern*, Concept Publications.
9. Martin Geoffrey J., 2005: *All Possible Worlds: A History of Geographical Ideas*, Oxford.
10. Soja, Edward 1989. *Post-modern Geographies*, Verso, London. Reprinted 1997: Rawat Publ., Jaipur and New Delhi.

C-4.2 : HUMAN GEOGRAPHY

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

UNIT-I :

Definition, Nature, Scope, Major Subfields, Contemporary Relevance.

UNIT-II :

Space and Society: Cultural Regions; Race; Religion and Language

UNIT-III :

Population: Population Growth and Demographic Transition Theory, Application in India;

UNIT-IV :

Population Distribution; Population Composition (Age, Gender, Race and Religion).

UNIT-V :

Settlements: Types and Patterns of Rural Settlements; Types of Urban Settlements; Trends and Patterns of World Urbanization

Suggested Readings :

1. Carr M : Patterns and change in human Geography
2. Debli H J : Human Geography Culture, Society and Space
3. Leong and Morgan : Human and Economic Geography
4. Majid Hussain : Human Geography
5. Knowel and warring : Economic and Social Geography made simple

C-4.3 : STATISTICAL METHODS IN GEOGRAPHY (PRACTICAL)

Full Marks - 100
End Sem Practical – 100/6 hrs

UNIT-I :

Use of Data in Geography: Geographical Data Matrix, Significance of Statistical Methods in Geography; Sources of Data, Scales of Measurement (Nominal, Ordinal, Interval, Ratio).

UNIT-II :

Tabulation and Descriptive Statistics: Frequencies (Deciles, Quartiles), Cross Tabulation, Central Tendency (Mean, Median and Mode, Centro-graphic Techniques, Dispersion (Standard Deviation, Variance and Coefficient of Variation).

UNIT-III :

Sampling: Purposive, Random, Systematic and Stratified.

UNIT-IV :

Theoretical Distribution: Probability and Normal Distribution.

UNIT-V :

Association and Correlation: Rank Correlation, Product Moment Correlation, and Simple Regression,

Suggested Readings :

1. Berry B. J. L. and Marble D. F. (eds.): *Spatial Analysis – A Reader in Geography*.
2. Ebdon D., 1977: *Statistics in Geography: A Practical Approach*.
3. Hammond P. and McCullagh P. S., 1978: *Quantitative Techniques in Geography: An Introduction*, Oxford University Press.
4. King L. S., 1969: *Statistical Analysis in Geography*, Prentice-Hall.
5. Mahmood A., 1977: *Statistical Methods in Geographical Studies*, Concept.
6. Pal S. K., 1998: *Statistics for Geoscientists*, Tata McGraw Hill, New Delhi.
7. Silk J., 1979: *Statistical Concepts in Geography*, Allen and Unwin, London.
8. Spiegel M. R.: *Statistics, Schaum's Outline Series*.
9. Yeates M., 1974: *An Introduction to Quantitative Analysis in Human Geography*, McGraw Hill, New York.

GE-4.4: INDIAN ECONOMY - II

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

UNIT-I : Agricultural Development in India

Indian Agriculture: nature, importance, trends in agricultural production and productivity, factors determining production, land reforms, new agricultural strategies and green revolution, rural credit; Agricultural marketing and warehousing.

UNIT-II : Industrial Development in India

Trends in industrial output and productivities; Industrial Policies of 1948, 1956, 1977 and 1991; Industrial Licensing Policies – MRTP Act, FERA and FEMA; Growth and problems of SSIs, Industrial sickness; Industrial finance; Industrial labour

UNIT-III : Tertiary Sector and HRD

Tertiary Sector: growth and contribution of service sector to GDP of India, share of services in employment; Human development – concept, evolution, measurement; HRD: indication, importance, education in India, Indian educational policy; Health and Nutrition.

UNIT-IV : Foreign Trade

Foreign Trade: role, composition and direction of India's foreign trade, trends of export and import in India, export promotion verses import substitution; Balance of Payments of India; India's Trade Policies;

UNIT-V : Capital Flows

Foreign Capital inflow & outflow-foreign assistance, foreign aid, international borrowing, foreign investment-FPI & FDI, MNCs

Suggested Books:

1. U. Kapila (2010): *Indian economy since Independence*. Academic Foundation, New Delhi
2. S. K. Misra and V. K. Puri (Latest Year): *Indian Economy — Its Development Experience*, Himalaya Publishing House, Mumbai
3. S. Chakraborty: *Development Planning: The Indian Experience*. Clarendon Press.
4. R. Dutt and K.P.M. Sundharam (Latest Year): *Indian Economy*, S. Chand & Company Ltd., New Delhi.
5. A. Panagariya (2008): *India: the Emerging Giant*, Oxford University Press, New York
6. S. Acharya and R. Mohan (Eds.) (2010): *India's Economy: Performance and Challenges*, Oxford University Press, New Delhi.
7. I. J. Ahluwalia and I. M. D. Little (Eds.) (1998): *India's Economic Reforms and Development: Essays for Manmohan Singh*, Oxford University Press, New Delhi.

GE-4.4 : ଓଡ଼ିଆ (ଦ୍ଵିତୀୟ ପତ୍ର)

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

ଯୁନିଟ୍-୧ :	ପ୍ରବନ୍ଧ: ସୌନ୍ଦର୍ଯ୍ୟ ଓ ପ୍ରେମ- ଶଶିଭୂଷଣ ରାୟ ଅଶ୍ରୁ- ନିତ୍ୟାନନ୍ଦ ମହାପାତ୍ର	୧୭
ଯୁନିଟ୍-୨ :	କବିତା: ମୌସୁମୀ- ରାଧାମୋହନ ଗଡ଼ନାୟକ ସମ୍ବାଦପତ୍ର- ସୀତାକାନ୍ତ ମହାପାତ୍ର	୧୭
ଯୁନିଟ୍-୩ :	ଗଳ୍ପ: ଶିକାର- ଭଗବତୀଚରଣ ପାଣିଗ୍ରାହୀ ଅନ୍ଧରାତିର ସୂର୍ଯ୍ୟ- ମହାପାତ୍ର ନୀଳମଣି ସାହୁ	୧୭
ଯୁନିଟ୍-୪ :	ବ୍ୟାକରଣ: ସମୋଚ୍ଚାରିତ ଭିନ୍ନାର୍ଥବୋଧକ ଶବ୍ଦ ବିପରୀତବୋଧକ ଶବ୍ଦ	୧୭
ଯୁନିଟ୍-୫ :	ବ୍ୟାକରଣ: ପ୍ରତିଶବ୍ଦ ଓ ଉପସର୍ଗ	୧୭

ପୁସ୍ତକ :

୧. ଗନ୍ଧ, କବିତା ଓ ପ୍ରବନ୍ଧ - ସଂକଳିତ ପୁସ୍ତକ, କଲେଜ ଛକ, ପୁଲବାଣୀ
୨. ସର୍ବସାର ବ୍ୟାକରଣ
୩. ବ୍ୟବହାରିକ ବ୍ୟାକରଣ

GE-4.4 : INDIAN ETHICS

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

UNIT-I:

Ethics: Meaning and Objective, Purusarthas (Dharma, Artha, Kama, Moksha)

UNIT-II:

Moral Foundation of Hindu Social Organisation: The doctrine of karma, Varna dharma, Asrama dharma, Sva dharma

UNIT-III:

Ethics of Buddhism: Four Noble Truth, Eight Fold Path

Ethics of Jainism: Triratna, Five Vows

UNIT-IV:

Ethics of Bhagvadgita: Niskama karma, Loksamgraha and Swadharma

UNIT-V:

Gandhian Ethics: Non-violence, Satyagraha, Sarvodaya and End & Means

Basic Study Materials :

1. I.C. Sharma, Indian Ethics.
2. B.K. Dash, A Manual of Indian Ethics.
3. A.K. Mohanty, Dharma.
4. K.Om Narayan Rao and Hrudananda Behera, An Introduction to Ethics.

GE-4.5: QUANTITATIVE AND LOGICAL THINKING

Full Marks – 100
Mid Sem – 20/1 hr
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

SEMESTER-V

C-5.1 : GEOGRAPHY OF INDIA

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3 hrs

UNIT-I :

Physical: Physiographic Divisions, soil and vegetation, climate (characteristics and classification)

UNIT-II :

Population: Distribution and growth

UNIT-III :

Economic: Mineral and power resources distribution and utilisation of iron ore, coal, petroleum, gas; agricultural production and distribution of rice and wheat, industrial development : automobile and Information technology

UNIT-IV :

Social: Distribution of population by race, caste, religion, language, tribes and their correlates

UNIT-V :

Regionalisation of India: Physiographic (Spate and R. L. Singh), Socio – cultural (Sopher and A. Ahmed), Economic (Sengupta).

Suggested Readings :

1. Deshpande C. D., 1992: *India: A Regional Interpretation*, ICSSR, New Delhi.
2. Johnson, B. L. C., ed. 2001. *Geographical Dictionary of India*. Vision Books, New Delhi.
3. Mandal R. B. (ed.), 1990: *Patterns of Regional Geography – An International Perspective. Vol. 3 – Indian Perspective*.
4. Sdyasuk Galina and P Sengupta (1967): *Economic Regionalisation of India*, Census of India
5. Sharma, T. C. 2003: *India - Economic and Commercial Geography*. Vikas Publ., New Delhi.
6. Singh R. L., 1971: *India: A Regional Geography*, National Geographical Society of India.
7. Singh, Jagdish 2003: *India - A Comprehensive & Systematic Geography*, Gyanodaya Prakashan, Gorakhpur.
8. Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional Geography*, Methuen.
9. Tirtha, Ranjit 2002: *Geography of India*, Rawat Publs., Jaipur & New Delhi.
10. Bose, A. et. al. eds, 2001: *Population in India's Development, 1947-2000*, Vikas, New Delhi.
11. Pathak, C. R. 2003: *Spatial Structure and Processes of Development in India*. Regional Science Assoc., Kolkata.

C-5.2 : REMOTE SENSING AND GIS (PRACTICAL)

Full Marks - 100

End Sem Practical – 100/6 hrs

UNIT-I :

Remote Sensing and GIS: Definition and Components, Development, Platforms and Types,

UNIT-II :

Aerial Photography and Satellite Remote Sensing: Principles, Types and Geometry of Aerial Photograph; Principles of Remote Sensing, EMR Interaction with Atmosphere and Earth Surface; Satellites (Landsat and IRS) and Sensors.

UNIT-III :

GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure

UNIT-IV :

Image Processing (Digital and Manual) and Data Analysis: Pre-processing (Radiometric and Geometric Correction), Enhancement (Filtering); Classification (Supervised and Un-supervised), Geo-Referencing; Editing and Output; Overlays

UNIT-V :

Interpretation and Application of Remote Sensing and GIS: Land use/ Land Cover, Urban Sprawl Analysis; Forests Monitoring

Suggested Readings :

1. Burrough P. A. and McDonnell R. A., 2000: *Principles of Geographical Information Systems–Spatial Information Systems and Geostatistics*, Oxford University Press.
2. Chang K.-T., 2009: *Introduction to Geographic Information Systems*, McGraw-Hill.
3. Clarke K. C., 2001: *Getting Started with Geographic Information Systems*, Prentice Hall.
4. DeMers M. N., 2000: *Fundamentals of Geographic Information Systems*, John Wiley & Sons.
5. French, G. T. 1996, *Understanding the GPS: An Introduction to the Global Positioning System*, Geo Research Inc.
6. Heywood I., Cornelius S. and Carver S., 2006: *An Introduction to Geographical Information Systems*, Prentice Hall.
7. Schuurman N., 2004: *GIS – A Short Introduction*, Blackwell.

DSE-5.3 : POPULATION GEOGRAPHY

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3 hrs

UNIT-I :

Defining the Field – Nature and Scope; Sources of Data with special reference to India (Census, Vital Statistics and NSS).

UNIT-II :

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

UNIT-III :

Population Dynamics: Fertility, Mortality and Migration – Measures, Determinants and Implications.

UNIT-IV :

Population Composition and Characteristics – Age-Sex Composition; Rural and Urban Composition; Literacy.

UNIT-V :

Contemporary Issues – Ageing of Population; Declining Sex Ratio; HIV/AIDS.

Suggested Readings :

1. Barrett H. R., 1995: *Population Geography*, Oliver and Boyd.
2. Bhende A. and Kanitkar T., 2000: *Principles of Population Studies*, Himalaya Publishing House.
3. Chandna R. C. and Sidhu M. S., 1980: *An Introduction to Population Geography*, Kalyani Publishers.
4. Clarke J. I., 1965: *Population Geography*, Pergamon Press, Oxford.
5. Jones H. R., 1990: *Population Geography*, Sage.
6. Jones, H. R., 2000: *Population Geography*, 3rd ed. Paul Chapman, London.
7. Lutz W., Warren C. S. and Scherbov S., 2004: *The End of the World Population Growth in the 21st Century*, Earthscan
8. Newbold K. B., 2009: *Population Geography: Tools and Issues*, Rowman and Littlefield Publishers.
9. Pacione M., 1986: *Population Geography: Progress and Prospect*, Taylor and Francis.
10. Peters G. L. and Larkin R. P., 1979: *Population Geography – Problems, Concepts and Prospects*, Kendall Hunt Publication Co.
11. Wilson M. G. A., 1968: *Population Geography*, Nelson.

DSE-5.4 : HYDROLOGY AND OCEANOGRAPHY

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

UNIT-I :

Hydrological Cycle: Systems approach in hydrology, human impact on the hydrological cycle; Precipitation, interception, evaporation, evapo-transpiration, infiltration, ground-water, run off and over land flow; Hydrological input and output.

UNIT-II :

River Basin and Problems of Regional Hydrology: Characteristics of river basins, basin surface run-off, measurement of river discharge; floods and droughts.

UNIT-III :

Water Resource Problems and Management: water demand and supply, water quality, interstate water dispute, water Rights, institutional and financial constraints, eco-hydrological consequences of environmental degradation.

UNIT-IV :

Ocean Floor Topography and Oceanic Movements – Waves, Currents and Tides.
Ocean Salinity and Temperature – Distribution and Determinants.

UNIT-V :

Coral Reefs and Marine Deposits and Ocean Resources: Types and Theories of Origin; Biotic, Mineral.

Suggested Readings :

1. Anikouchine W. A. and Sternberg R. W., 1973: *The World Oceans: An Introduction to Oceanography*, Prentice-Hall.
2. Garrison T., 1998: *Oceanography*, Wordsworth Company, Belmont.
3. Gerald S., 1963: *General Oceanography: An Introduction*, John Wiley & Sons, New York.
4. Kershaw S., 2000: *Oceanography: An Earth Science Perspective*, Stanley Thornes, UK.
5. King C. A. M., 1962: *Oceanography for Geographers*, Edward Arnold.
6. Pinet P. R., 2008: *Invitation to Oceanography* (Fifth Edition), Jones and Barlett Publishers, USA, UK and Canada.
7. Sharma R. C. and Vatal M., 1980: *Oceanography for Geographers*, Chaitanya Publishing House, Allahabad.
8. Stowe K., 1987: *Essentials of Ocean Science*, John Wiley & Sons, New York.
9. Sverdrup K. A. and Armbrust, E. V., 2008: *An Introduction to the World Ocean*, McGraw Hill, Boston.
10. Thurman H. V., 1996: *Essentials of Oceanography*, Prentice-Hall, New Jersey.

SEMESTER-VI

C-6.1 : REGIONAL PLANNING AND DEVELOPMENT

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

UNIT-I :

Definition of Region, Evolution and Types of Regional planning: Formal, Functional, and Planning Regions and Regional Planning; Need for Regional Planning; Types of regional Planning.

UNIT-II :

Choice of a Region for Planning: Characteristics of an Ideal Planning Region; Delineation of Planning Region; Regionalization of India for Planning (Agro Ecological Zones)

UNIT-III :

Theories and Models for Regional Planning: Growth Pole Model of Perroux; Growth Centre Model in Indian Context; Myrdal, Hirschman, Rostow and Friedmann; Village Cluster

UNIT-IV :

Changing Concept of Development, Concept of underdevelopment; Efficiency-Equity Debate
Measuring development: Indicators (Economic, Social and Environmental)

UNIT-V :

Global Pattern of Development: inter-regional variations; Human development: International, interstate comparison of India.

Suggested Readings :

1. Bhalla A.S., 1992: *Uneven Development in the Third World: A Study of India and China*, Macmillan, London.
2. Bhat, L.S., 1976: *Micro Level Planning in India*, K.B. Pub. New Delhi.
3. Dreze J. and Sen A., 1996: *Indian Development: Select Regional Perspectives*, Oxford University Press.
4. Hall, Peter 1992: *Urban and Regional Planning*, Routledge, London.
5. Misra R.P. (ed), 1980: *Regional Planning Concepts, Techniques, Policies and Case Studies*, Vikas Publishing, Delhi.
6. Misra R.P., Sundaram K.V. and Prakasa Rao V. L. S., 1974: *Regional Development Planning in India A New Strategy*, Vikas Publishing, Delhi.
7. Sharma H.S and Chattopadhyaya S., 1998: *Sustainable Development: Issues and Case Studies*, Concept Publishing, Delhi
8. Sundaram K. V., 1980: *Decentralised Multilevel Planning: Principles and Practices (Asian and African Experiences)*, Concept Publishing, Delhi.
9. Yugandhar, B.N. and Mukherjee, Amitava (eds.) 1991: *Readings in De-centralised Planning (with special reference to District Planning)*, 2 vols. Concept Publs. Co., New Delhi.
10. Misra, R.P. & Misra, K. eds. 1998: *Million Cities of India*, Sustainable Development Foundation, New Delhi.

C-6.2 : DISASTER MANAGEMENT BASED PROJECT WORK (PRACTICAL)

Full Marks - 100

End Sem Practical – 100/6 hrs

The Project work Report based on any two field based case studies among following disasters and one disaster preparedness plan of respective college or locality:

1. Flood
2. Drought
3. Cyclone
4. Earthquake
5. Landslides
6. Human Induced Disasters: Fire Hazards, Chemical, Industrial accidents

DSE-6.3 : URBAN GEOGRAPHY

Full Marks - 100

Mid Sem – 20/1 hr

End Sem – 80/3 hrs

UNIT-I :

Urban geography: Introduction, nature and scope; history of urbanisation

UNIT-II :

Patterns of urbanisation in developed and developing countries

UNIT-III :

Functional classification of cities: Quantitative and Qualitative Methods

UNIT-IV :

Urban Issues: problems of housing, slums, civic amenities (water and transport)

UNIT-V :

Case studies of Delhi, Mumbai, Kolkata and Chennai with reference to Urban Issues

Suggested Readings :

1. Fyfe N. R. and Kenny J. T., 2005: *The Urban Geography Reader*, Routledge.
2. Graham S. and Marvin S., 2001: *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*, Routledge.
3. Hall T., 2006: *Urban Geography*, Taylor and Francis.
4. Kaplan D. H., Wheeler J. O. and Holloway S. R., 2008: *Urban Geography*, John Wiley.

5. Knox P.L. and McCarthy L., 2005: *Urbanization: An Introduction to Urban Geography*, Pearson Prentice Hall New York.
6. Knox P.L. and Pinch S., 2006: *Urban Social Geography: An Introduction*, Prentice-Hall.
7. Pacione M., 2009: *Urban Geography: A Global Perspective*, Taylor and Francis.
8. Sassen S., 2001: *The Global City: New York, London and Tokyo*, Princeton University Press.
9. Ramachandran R (1989): *Urbanisation and Urban Systems of India*, Oxford University Press, New Delhi
10. Ramachandran, R., 1992: *The Study of Urbanisation*, Oxford University Press, Delhi

DSE-6.4 : PROJECT REPORT

Full Marks - 100
End Sem Project – 100

Introducing Research Component in Under-Graduate Courses

Project work/Dissertation is considered as a special course involving application of knowledge in solving / analyzing /exploring a real life situation / difficult problem.

Topics to be announced by the HOD.

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