



University of Gour Banga

Syllabus for
Choice Based Credit System (CBCS)
(Semester System)
Semester (I+II+III+IV+V+VI)

SUBJECT: GEOGRAPHY (GENERAL)

University of Gour Banga
P.O. – Mokdumpur,
Dist. – Malda
West Bengal
PIN - 732103

Descriptive Type Question Pattern

For Discipline Core (DC) and Discipline Specific Elective (DSE)

Theory (Semester End Written Examination)

Full Marks = 25

(10 Marks x 1 Question) + (5 Marks x 3 Questions)

Internal Assessment

Full Marks = 10

(As mentioned in corresponding syllabus)

**Practical (Semester End Laboratory based Test)**

Full Marks = 15

(10 Marks x 1 Practical) + (05Marks x 1 Practical)

Word limits for descriptive type questions (Theory)

10 marks: 600 - 700

5 marks: 300 - 350

For Skill Enhancement Course (SEC)**Theory (Semester End Written Examination)**

Full Marks = 40

(10 Marks x 2 Question) + (5 Marks x 4 Questions)

Duration of Examination

Theory paper of 25 marks: 1.5 hours

Theory paper of 40 marks: 2 hours

Practical paper of 15 marks: 1.5 hours

Practical paper of 50 marks: 4 hours

**Semester wise Course Structure under CBCS
For B.A. /B.Sc. General Program (GEOGRAPHY)**

Academic Semesters	COURSES				Credits		Marks	
	Discipline Core (DC)	Discipline Specific Elective (DSE) [Optional]	Generic Elective (GE) [For B.A. Only]	Skill Enhancement Course (SEC)	B.A.	B. Sc.	B.A.	B. Sc.
SEM-I	DC1(6)	--			06	06	50	50
SEM-II	DC2(6)	--			06	06	50	50
SEM-III	DC3(6)	--		SEC-1 (2)	08	08	100	100
SEM-IV	DC4(6)	--			06	06	50	50
SEM-V	--	DSE-1 (6) DSE-2 (6)	GE 1 (6)	SEC-2 (2)	14	08	150	100
SEM-VI	--	DSE-3 (6) DSE -4(6)	GE 2 (6)		12	06	100	50
Total	--	--		--	52	40	500	400

**Marks & Question type Distribution for General Courses**

No. Of courses	Total credit	Total marks	Division of marks of each course				Marks for question type	
			Full marks of each course	Internal	End semester examination		MCQ	Written
					Theoretical	Practical		
14 DC	14x6=84	14x50=700	50 (practical based)	10	25	15	nil	40
04 DSE	04x6=24	4x50=200	50 (practical based)	10	25	15	nil	40
04GE	04x6=24	4x50=200	50 (practical based)	10	25	15	nil	40
02 SEC	02x2=04	2x50=100	50	10	40	nil	nil	40
AEC-1 (ENVS)	01x2=02	1x50=50	50	10 (Project) to be internally assessed	40	nil	40	nil
AEC-2 (Communicative Bengali/English)	01x2=02	1x50=50	50	10	40	nil	40	nil
Grand Total	140	1300	--	--	--	--	--	--



SEMESTER WISE DISTRIBUTION OF CONTENTS

	Discipline Core (DC)		Discipline Specific Elective (DSE) [Optional]		Generic Elective (GE) [For B.A. Only]		Skill Enhancement (SEC)
	Theory	Practical	Theory	Practical	Theory	Practical	Theory
SEM-I	DC1A Geotectonic and Geomorphology	DC1B-Practical	--				--
SEM-II	DC2A Climatology and Biogeography	DC2B-Practical	--				--
SEM-III	DC3A Geography of India	DC3B-Practical	--				SEC-1 Remote Sensing and Geographical Information System
SEM-IV	DC4A Economic Geography	DC4B-Practical	--				--
SEM-V	--	--	DSE1A Social and Cultural Geography/ Population and Settlement Geography	DSE1B-Practical	GE1A Disaster Management	GE1B Practical	SEC-2 Field Work Techniques and Field Report Preparation
SEM-VI	--	--	DSE3A Hydrology/ Oceanography	DSE3B-Practical	GE2A Rural Development	GE2B Practical	-
Total	--		--				--

SEMESTER WISE DISTRIBUTION OF CREDITS & MARKS

Semester-I

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	DC1A Geotectonic and Geomorphology (04)	DC1B-Practical (02)	06	50
Discipline Specific Elective (DSE)	-	-	-	-
Skill Enhancement (SEC)	-	-	-	-



Semester-II

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	DC2A Climatology and Biogeography (04)	DC2A Practical (02)	06	50
Discipline Specific Elective (DSE)	-	-	-	-
Skill Enhancement (SEC)	-	-	-	-

Semester-III

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	DC3A Geography of India (04)	DC3B-Practical (02)	06	50
Discipline Specific Elective (DSE)	-	-	-	-
Skill Enhancement (SEC)	SEC-1 Remote Sensing and Geographical Information System (02)	-	02	50

Semester-IV

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	DC4A Economic Geography (04)	DC4B -Practical (02)	06	50
Discipline Specific Elective (DSE)	-	-	-	-
Skill Enhancement (SEC)	-	-	-	-

Semester-V

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	-	-	-	-
Discipline Specific Elective (DSE)	DSE1A Social and Cultural Geography/ Population and Settlement Geography (04)	DSE1B -Practical (02)	06	50
Skill Enhancement (SEC)	SEC2 Field Work Techniques and Field Report Preparation (02)	-	02	50
General Elective (GE) [BA only]	GE1A Disaster Management (04)	GE1B Practical (02)	06	50

Semester-VI

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	-	-	-	-
Discipline Specific Elective (DSE)	DSE3A Hydrology/ Oceanography (04)	DSE3B- Practical (02)	06	50
Skill Enhancement (SEC)	-	-	-	-
General Elective (GE) [BA Only]	GE2A Rural development (04)	GE2B Practical (02)	06	50



DETAILED SYLLABUS

Semester-I

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	DC1A Geotectonic and Geomorphology (04)	DC1B-Practical (02)	06	50
Discipline Specific Elective (DSE)	-	-	-	-
Skill Enhancement (SEC)	-	-	-	-

DC1A: Geotectonics and Geomorphology (Theory)

Total Credit	04 Credits
Total Marks	35 Marks
• Semester End Examination	25 Marks Mode: Written Examination; Exam. Duration: 1.5 Hours; Question Pattern: Students have to answer One question carrying 10 marks out of Two given questions; Three questions carrying 5 marks each out of given Six questions. Question carrying 10 marks will have at least two parts.
• Internal Assessment	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

Part 1: Geotectonics

1. Origin of the Earth: Tidal Hypothesis, Continental Drift Theory, Interior of the earth, earthquakes causes and consequences, Plate tectonics
2. Rocks: origin, classification, characteristics, influence of rocks on landforms and topography.

Part 2: Geomorphology

3. Processes of erosion, deposition and resulting landforms: river, wind, glacier, Concept of fluvial cycle of erosion and its interruption.
4. Weathering, mass wasting and topographic expression.

References

1. Khullar, D. R. (2014): Physical Geography, Kalyani Publishers, Delhi
2. Singh, Savindra (2012): Physical Geography, Prayag Pustak Bhavan, Allahabad
3. Mitra, Sen and Sengupta (21012): Prakritik Bhugol- Vol. 1 & Vol. 2
4. Basu and Maity (2010): Adhunik Bhumirup Bigyan
5. Bandopadhyay, Tarun, Kumar (2010): Adhunik Bhu-Porichoy
6. Basu, partha, (2010): Prokriya Sankranta Bhumirup Bidya
7. Bloom A. L. (2001): Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, New Delhi.
8. Bridges E. M. (1990): World Geomorphology, Cambridge University Press, Cambridge.
9. Kale V. S. and Gupta A. (2001): Introduction to Geomorphology, Orient Longman, Hyderabad.
10. Thornbury W. D. (1969): Principles of Geomorphology, Wiley

**DC1B-Practical (02)**

Total Credit	02 Credits
Total Marks	15 Marks
• Semester End Examination	15 Marks Mode: Laboratory based Examination; Exam. Duration: 1.5 Hours

List of practical

1. Concept of scale, Principles & Types, Scale Conversion; Simple Linear Scale calculation and construction
2. SoI Topographical Map of Plateau areas (1:50,000): Broad Physiographic divisions and drainage; Profile (Serial), Transect Chart for relating physical and cultural features
3. Identification of rocks and minerals (megascopic) (Basalt, Granite, Gneiss, Sandstone, Quartzite, Limestone, Mica, Talc, Calcite and Feldspar)

References

1. Singh, R.L. and Singh R.P.B. (1972): Elements of Practical Geography; Kalyani Publishers.
2. Khan, MD.Z.A. (1998): Text Book of Practical Geography: Concept Publishing Company.
3. Monkhouse F. J and Wilkinson, H.R. (1971): Maps and Diagrams B.I. publications private limited, new Delhi
4. Ahmed, I. (1994): Practical Geography, Jawahar Publishers and Distributors, New Delhi
5. Sarkar, A. (1997): Practical Geography: A systematic approach, Orient Longman Ltd, Hyderabad
6. Singh, Gopal, (1998): Map Work and Practical Geography
7. Adhikari, Sankar, (2015): Honours Baboharik Bhugol, Dove Publication
8. Ahamed, Asik, (2018): Baboharik Bhugol, A B J Publisher
9. Ahmed, I, (1989): A Text Book of Practical Geography, Heritage Publishers, New Delhi.

Semester-II

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	DC2A Climatology and Biogeography (04)	DC2A Practical (02)	06	50
Discipline Specific Elective (DSE)	-	-	-	-
Skill Enhancement (SEC)	-	-	-	-

DC2A: Climatology, Soil and Bio-Geography (Theory)

Total Credit	04 Credits
Total Marks	35 Marks
• Semester End Examination	25 Marks Mode: Written Examination; Exam. Duration: 1.5 Hours; Question Pattern: Students have to answer One question carrying 10 marks out of Two given questions; Three questions carrying 5 marks each out of given Six questions. Question carrying 10 marks will have at least two parts.
• Internal Assessment	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

**Climatology, Soil and Bio-Geography**

1. Concepts of weather and climate, controlling factors of climate, Atmospheric layers, Atmospheric Temperature, Planetary and periodic winds, Monsoon, local winds. insolation and heat budget
2. Atmospheric moisture: Humidity, types of precipitation, evaporation, condensation, Greenhouse effect and its impact
3. Factors of soil formation, Soil profiles, soil erosion and conservation.
4. Factors responsible for plant growth; Adaptation mechanism, characteristics of mangrove and xerophytes.

References

1. Barry R. G. and Corley R. J.,(1998): Atmosphere, Weather and Climate, Rout ledge, New York.
2. Critchfield H. J., (1987): General Climatology, Prentice-Hall of India, New Delhi
3. Trewartha G. T. and Home L. H., (1980): An Introduction to Climate, Mc Graw-Hill.
4. Lal, D S (2006): Climatology, Prayag Pustak Bhavan, Allahabad
5. Rafik Ahamed, (2004): Abhaoo Jalbayu Vijnan, Gyankosh Prokashani, Dhaka
6. Dey, M.K. and Dey,P.P(2015):Jib Bhu Porichoy, Tapati Publisher, Kolkata
7. Brady, N.C. and Weil, R.R. (1996): The Nature and Properties of Soil, 11th edition, Longman, London: Cambridge University Press, Cambridge

DC2B -Practical (02)

Total Credit	02 Credits
Total Marks	15 Marks
• Semester End Examination	15 Marks
	Mode: Laboratory based Examination;
	Exam. Duration: 1.5 Hours

List of practical

1. Rain Gauge, Maximum and Minimum Thermometer and Hygrometer
2. Climograph and Hythergraph
3. Prismatic compass survey, plain table (radiation method)

References

1. Monkhouse F. J and Wilkinson,H.R.(1971): Maps and Diagrams B.I. publications private limited, new Delhi
2. Khan, MD.Z.A. (1998): Text Book of Practical Geography: Concept Publishing Company.
3. Ahmed, I. (1994): Practical Geography, Jawahar Publishers and Distributors, New Delhi
4. Sarkar,A. (1997): Practical Geography: A systematic approach, Orient Longman Ltd, Hyderabad
5. Khullar.D (2014): King's Practical Geography, Educational Publisher, Delhi

Semester-III

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	DC3A Geography of India (04)	DC3B-Practical (02)	06	50
Discipline Specific Elective (DSE)	-	-	-	-
Skill Enhancement (SEC)	SEC-1 Remote Sensing and Geographical Information System (02)	-	02	50

**DC3A: Geography of India (Theory)**

Total Credit	04 Credits
Total Marks	35 Marks
• Semester End Examination	25 Marks Mode: Written Examination; Exam Duration: 1.5 Hours; Question Pattern: Students have to answer One question carrying 10 marks out of Two given questions; Three questions carrying 5 marks each out of given Six questions. Question carrying 10 marks will have at least two parts.
• Internal Assessment	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

Geography of India

1. Major physiographic divisions of India and their geomorphological characteristics (Indo-Gangetic Plain); Characteristics of Indian drainage systems (Ganga River).
2. Climatic zones of India; Soil zones of India; Vegetation: zones, deforestation and conservation of forests.
3. Agriculture: salient features, problems and remedial measures.
4. Industry: Industrial regions of India; Hooghly Industrial Region; Ahmedabad-Vadodara-Jamnagar Industrial Region.

References

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. Khullar, D. R. (2018): India a Comprehensive Geography. Kalyani Publishers, New Delhi
4. Mandal R. B. ed. (1990): Patterns of Regional Geography – An International Perspective. Vol. 3 – Indian Perspective.
5. Pathak, C. R. (2003): Spatial Structure and Processes of Development in India. Regional Science Assoc., Kolkata.
6. Sdyasuk Galina and P Sengupta (1967): Economic Regionalisation of India, Census of India
7. Sharma, T.C. (2013): Economic Geography of India. Rawat Publication, Jaipur .
8. Singh R. L. (1971): India: A Regional Geography, National Geographical Society of India.
9. Singh, Jagdish (2003): India - A Comprehensive & Systematic Geography, GyanodayaPrakashan, Gorakhpur.
10. Spate O. H. K. and Learmonth A. T. A. (1967): India and Pakistan: A General and Regional Geography, Methuen.
11. Tirtha, Ranjit (2002): Geography of India, Rawat Publs., Jaipur & New Delhi.
12. Tiwari, R.C. (2007): Geography of India. Prayag Pustak Bhawan, Allahabad

DC3B -Practical (02)

Total Credit	02 Credits
Total Marks	15 Marks
• Semester End Examination	15 Marks Mode: Laboratory based Examination; Exam Duration: 1.5 Hours

List of practical

1. Geological Map: Concept of dip, strike, bed and bedding plane and unconformities.
2. Interpretation of simple uniclinal structures and simple folded structures with given dip and direction, geological structure and topography.

**References**

1. Sarkar, A. (1997): Practical Geography: A systematic approach, Orient Longman Ltd, Hyderabad
2. Saha, P.K. and Basu P. (2004): Advanced Practical Geography: Books and Allied Kolkata
3. Ahmed, I. (1994): Practical Geography, Jawahar Publishers and Distributors, New Delhi
4. Adhaky Sankar (2013): Honours Bayboharik Bhugol, Dove Publishing House

SEC-1 Remote Sensing and Geographical Information System

Total Credit	06 Credits
Total Marks	50 Marks
<ul style="list-style-type: none"> • Semester End Examination 	40 Marks Mode: Written Examination; Exam Duration: 2.0 Hours; Question Pattern: Students have to answer <i>two</i> questions carrying 10 marks out of <i>four</i> given questions; <i>four</i> questions carrying 5 marks each out of given <i>eight</i> questions. Question carrying 10 marks will have at least two parts.
<ul style="list-style-type: none"> • Internal Assessment 	10 Marks Mode: Written Test on given theoretical topics as directed by the Department)

Remote Sensing and Geographical Information System

1. Remote Sensing: Definition, stages, advantages and limitations, applications, energy Source: Shortwave & Long wave EMR.
2. Remote Sensing Platforms: Ground, Air and Space Bourne Platforms, Sun-synchronous and Geostationary satellites.
3. Definition of Aerial Photographs, Types. Keys of visual interpretation of Aerial Photo and Satellite Imageries. use, advantages and limitations of satellite imageries.
4. G.I.S.: Definition, components, application, advantages and limitations.

References

1. Campbell J. B., (2007): Introduction to Remote Sensing, Guildford Press.
2. Jensen J. R., (2004): Introductory Digital Image Processing: A Remote Sensing Perspective, Prentice Hall.
3. Joseph, G. (2005): Fundamentals of Remote Sensing United Press India.
4. Lillesand T. M., Kiefer R. W. and Chipman J. W., (2004): Remote Sensing and Image Interpretation, Wiley. (Wiley Student Edition).
5. Nag P. and Kudra, M., (1998): Digital Remote Sensing, Concept, New Delhi.
6. Rees W. G., (2001): Physical Principles of Remote Sensing, Cambridge University Press.
7. Singh R. B. and Murai S., (1998): Space-informatics for Sustainable Development, Oxford and IBH Pub.
8. Wolf P. R. and Dewitt B. A., (2000): Elements of Photogrammetry: With Applications in GIS, McGrawHill.
9. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
10. Chauniyal, D.D. (2010) Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda Pustak Bhawan, Allahabad.



Semester-IV

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	DC4A Economic Geography (04)	DC4B -Practical (02)	06	50
Discipline Specific Elective (DSE)	-	-	-	-
Skill Enhancement (SEC)	-	-	-	-

DC4A Economic Geography (Theory)

Total Credit	04 Credits
Total Marks	35 Marks
<ul style="list-style-type: none"> Semester End Examination 	25 Marks Mode: Written Examination; Exam. Duration: 1.5 Hours; Question Pattern: Students have to answer One question carrying 10 marks out of Two given questions; Three questions carrying 5 marks each out of given Six questions. Question carrying 10 marks will have at least two parts.
<ul style="list-style-type: none"> Internal Assessment 	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

Economic Geography

1. Concept of economic activities and sectors of economy: primary, secondary, tertiary, quaternary and quinary; Resource: Definition, classification, resource conservation.
2. Forest Resource: Importance, conservation; Concept of social forestry and agro-forestry.
3. Agriculture: Intensive rice cultivation (Asia); Plantation agriculture: Tea (India).
4. Power: Coal, Petroleum (distribution and use); Non-conventional: Wind, Solar (distribution and use); Industries: Iron and Steel (India) ; Cotton Textile (India).

References

1. Goh Cheng Leong, Elizabeth Martin, (1982): Human & Economic Geography, Oxford Press
2. Alexander J. W., (1963): Economic Geography, Prentice-Hall Inc., Englewood Cliffs, New Jersey.
3. Coe N. M., Kelly P. F. and Yeung H. W., (2007): Economic Geography: A Contemporary Introduction, Wiley-Blackwell.
4. Hodder B. W. and Lee Roger, (1974): Economic Geography, Taylor and Francis.
5. Combes P., Mayer T. and Thisse J. F., (2008): Economic Geography: The Integration of Regions and Nations, Princeton University Press.
6. Wheeler J. O., (1998): Economic Geography, Wiley
7. Durand L., (1961): Economic Geography, Crowell.
8. Bagchi-Sen S. and Smith H. L., (2006): Economic Geography: Past, Present and Future, Taylor and Francis.
9. Willington D. E., (2008): Economic Geography, Husband Press.

**DC4B -Practical (02)**

Total Credit	02 Credits
Total Marks	15 Marks
• Semester End Examination	15 Marks Mode: Laboratory based Examination; Exam. Duration: 1.5 Hours

List of practical

1. Cartograms showing statistical data: Simple and compound Bar Diagram, Proportional circles, pie and proportional divided circle and proportional squares.
2. Map Projection: Simple conical projection with one standard parallel, cylindrical equal area projection and Gnomonic projection (polar case)

References

1. Monkhouse F. J and Wilkinson, H.R. (1971): Maps and Diagrams B.I. publications private limited, new Delhi
2. Khan, MD.Z.A. (1998): Text Book of Practical Geography: Concept Publishing Company.
3. Ahmed, I. (1994): Practical Geography, Jawahar Publishers and Distributors, New Delhi
4. Sarkar, A. (1997): Practical Geography: A systematic approach, Orient Longman Ltd, Hyderabad
5. Khullar, D (2014): King's Practical Geography, Educational Publisher, Delhi

Semester-V

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core (DC)	-	-	-	-
Discipline Specific Elective (DSE) [Optional]	DSE1A Social and Cultural Geography/ Population and Settlement Geography (04)	DSE1B -Practical (02)	06	50
Skill Enhancement (SEC)	SEC2 Field Work Techniques and Field Report Preparation (02)	-	02	50
General Elective (GE) [For B.A Only]	GE1A Disaster Management (04)	GE1B Practical (02)	06	50

DSE1A: Social & Cultural Geography (Theory)

Total Credit	04 Credits
Total Marks	35 Marks
• Semester End Examination	25 Marks Mode: Written Examination; Exam. Duration: 1.5 Hours; Question Pattern: Students have to answer One question carrying 10 marks out of Two given questions; Three questions carrying 5 marks each out of given Six questions. Question carrying 10 marks will have at least two parts.
• Internal Assessment	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

**Social Geography**

1. Social Geography: Scope and content, concept of class and caste with reference to India.
2. Factors affecting growth and development of human habitat. Man's adaptation to the environment- Mountains: Gujjar, Hot: Bushman, Foothills: Toto and Cold: Eskimo.

Cultural Geography

3. Concept of culture, cultural groups, cultural region, cultural hearth.
4. Cultural landscape, Language, religion.

References

1. Ahmed, A. (2004): Social Geography, Rawat Publication, New Delhi
2. Chapman, K. (1979): People, Pattern and Process – An Introduction to Human
4. Jones, E. and Eyles, J. (1977): An Introduction to Social Geography, Oxford University Press, Oxford.
5. Rubenstein, J. M. and Becon, J. M. (1990): Cultural Geography, John Wiley and Sons Inc., New York.
6. Spencer, J. E. and Thomas, W. L. (1969): Cultural Geography, John Wiley and Sons Inc., New York.
9. Sen, Jotirmoy, (2011): A Text Book of Social and Cultural Geography, Kalyani Publisher, Delhi

DSE1B -Practical

Total Credit	02 Credits
Total Marks	15 Marks
• Semester End Examination	15 Marks Mode: Laboratory based Examination; Exam. Duration: 1.5 Hours

List of practical

1. Age-sex pyramid, Choropleth technique and traffic flow diagram
2. Lorenz curve.

Reference

1. Mahmood A., 1977: Statistical Methods in Geographical Studies, Concept.
2. Ahmed, I. 1994: Practical Geography, Jawahar Publishers and Distributors, New Delhi
3. Sarkar, A. (1997): Practical Geography: A systematic approach, Orient Longman Ltd, Hyderabad
4. Khullar, D 2014: King's Practical Geography, Educational Publisher, Delhi

DSE1A: Population and Settlement Geography (Theory)

Total Credit	04 Credits
Total Marks	35 Marks
• Semester End Examination	25 Marks Mode: Written Examination; Exam. Duration: 1.5 Hours; Question Pattern: Students have to answer One question carrying 10 marks out of Two given questions; Three questions carrying 5 marks each out of given Six questions. Question carrying 10 marks will have at least two parts.
• Internal Assessment	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

**Population Geography**

1. Population: World population distribution and factors responsible for uneven distribution and density of population.
2. Factors of population growth: Fertility, Mortality and Migration; Problems related to population growth.

Settlement Geography

3. Rural settlement: Definition, types and pattern.
4. Urban settlement: definition, census categories of urban settlements in India.

References

1. Carter, H.(1975): The Study of Urban Geography, Edward Arnold, London
2. Daniel, P. (2002): Geography of Settlement, Rawat Publication., Jaipur & New Delhi.
3. Ghosh, S. (1998) : Settlement Geography, Orient Longman Ltd. , Kolkata.
4. Mandal, R.B. (2001): Introduction to Rural Settlements, Concept Publishing Company, New Delhi
5. Misra, H.N. (1987) Rural Georaphy, Vol. IX, Contributions to Indian Geography, Heritage Publishers, New Delhi.
6. Chandna, R.C.(1986): A Geography of Population, Kalyani Publishers, New Delhi
7. Clarke, J. I. (1971): Population Geography and the Developing Countries, Pergamon Press, Oxford
8. Clarke, J. I. (1972): Population Geography, Pergamon Press, Oxford
9. Hassan, M.H. (2005): Population Geography, Rawat Publications, New Delhi
10. Zacharia, E. and Sinha, V.C., (1986) : Elements of Demography, Allied publishers Pvt Ltd, New Delhi
11. Ghosh, S. (1998): Settlement Geography, Orient Longman Ltd, Kolkata.
12. Mandal, R.B. (2001): Introduction to Rural Settlements, Concept Publishing Company, New Delhi

DSE1B –Practical

Total Credit	02 Credits
Total Marks	15 Marks
• Semester End Examination	15 Marks Mode: Laboratory based Examination; Exam. Duration: 1.5 Hours

List of practical

1. Calculation of decadal population growth, Computation of population density (Arithmetic and agricultural).
2. Identification of Settlement types and patterns from SOI Topo sheet (1:50,000)

References

1. Zacharia, E. and Sinha, V.C., (1986) : Elements of Demography, Allied publishers Pvt Ltd, New Delhi
2. Chandna, R.C. (1986): A Geography of Population, Kalyani Publishers, New Delhi
3. Saha, P.K. and Basu P. (2004):Advanced Practical Geography: Books and Allied Kolkata
4. Khullar.D (2014): King's Practical Geography, Educational Publisher, Delhi

SEC-2 Fieldwork Techniques and Field Report Preparation

Total Credit	06 Credits
Total Marks	50 Marks
• Semester End Examination	40 Marks Mode: Written Examination; Exam. Duration: 2.0 Hours; Question Pattern: Students have to answer <i>two</i> questions carrying 10 marks out of <i>four</i> given questions; <i>four</i> questions carrying 5 marks each out of given <i>eight</i> questions. Question carrying 10 marks will have at least two parts.Exam. Duration: 2 Hours;
• Internal Assessment	10 Marks (Interpretation of field based data and Report Writing)



Fieldwork Techniques and Field Report Preparation

- 1 Sources of data: Primary and secondary; Methods of collection of primary data;
- 2 Preparation of Questionnaire/ Survey schedule
- 3 Data representation techniques: Frequency distribution table and Histogram, Frequency polygon, Frequency curve, Cumulative Frequency polygon, Cumulative Frequency curve (ogive),
- 4 Data analysis techniques: Mean, median, mode, partition values, range, mean deviation, quartile deviation.

References

1. Clifford, N., Cope, M., Gillespie, T.W., French, S. (Eds) (2016): Key Methods in Geography, 3rd ed, Sage.
2. Gardiner, V., Dacombe, R.V. (1982): Geomorphological Field Manual, George Allen & Unwin
3. Lindholm, R. (1987): A Practical Approach to Sedimentology, Allen & Unwin.
4. Monkhouse, F.J., Wilkinson, H.R. (1971): Maps and Diagrams: Their Compilation and Construction, 3rd ed (2017 reprint), Alphaneumera-Kolkata
6. Northey, N., Draper, D., Knight, D.B. (2015): Making Sense in Geography and Environmental Sciences: A Student's Guide to Research and Writing, 6th ed, Oxford University Press.
8. Saha, P.K. and Basu, P. (2009): Advanced Practical Geography, Books and Allied (P) Ltd., Kolkata

• **General Guidelines for Field Report Preparation:**

1. Field report will be conducted using any relevant topic from Physical and Human Geography. Any specific issue could be addressed.
2. The report is to be prepared for a C.D. Block /P.S./ Mouza/ G. P./ Municipality/ Sub- division/ Drainage Basin area or any other physical units primarily on the basis of field survey.
3. Participation of each student in the Field Work is mandatory & Certificate of field coordinator regarding the participation in Field Work is to be attached in the Report.
4. Field report is to be prepared by the student in his/her own hand writing but maps and diagrams may be prepared with the aid of software.
5. No part of the report should contain any photocopied or Printed/typed material.
6. Length of the report not to exceed 1000 words.
7. The Field Report should contain up to 3 pages for diagrams and maximum of 2 pages for photographs.
8. Questionnaire(s)/ schedule(s) are to be prepared for collection of primary data and one of the same as filled in during the field work, duly signed by the concerned teacher, be annexed with the field report.
9. The report should be prepared normally with primary data collected by field survey.
10. Incorporation of secondary data should not exceed 1/5th of the total report.

**GE1A: Disaster Management (Theory)****[To be opted by students from other disciplines only]**

Total Credit	04 Credits
Total Marks	35 Marks
<ul style="list-style-type: none"> Semester End Examination 	25 Marks Mode: Written Examination; Exam. Duration: 2.0 Hours; Question Pattern: Students have to answer <i>One</i> question carrying 10 marks out of <i>Two</i> given questions; <i>Three</i> questions carrying 5 marks each out of given <i>Six</i> questions. Question carrying 10 marks will have at least two parts.
<ul style="list-style-type: none"> Internal Assessment 	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

Disaster Management

- Disasters and Hazards: Definition and Concepts: Risk and Vulnerability; Classification
- Disasters in India: (a) Flood: Causes, Impact, Distribution and Mapping;
- River bank Erosion: Causes, Impact, Distribution and Mapping; Drought: Causes, Impact, Distribution
- Disasters in India: (b) Earthquake and Tsunami: Causes, Impact, Distribution; Cyclone: Causes, Impact, Distribution.
- Manmade disasters: Causes, Impact, Distribution
- Response and Mitigation to Disasters: Mitigation and Preparedness,

References

- Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
- Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
- Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
- Singh Jagbir (2007) "Disaster Management Future Challenges and Oppurtunities", 2007.

GE1B: Disaster Management (Practical)

Total Credit	02 Credits
Total Marks	15 Marks
<ul style="list-style-type: none"> Semester End Examination 	15 Marks Mode: Laboratory based Examination; Exam. Duration: 1.5 Hours

List of practical

- Rainfall Dispersion Diagram, Sphere Diagram
- Ombrothermic diagram, Climatic Chart

References

- Adhakary, S. (2013): Honours Bayboharik Bhugol, Dove Publishing House, Kolkata
- Sarkar, A. (1997): Practical Geography: A systematic approach, Orient Longman Ltd, Hyderabad
- Saha, P.K. and Basu P. (2004): Advanced Practical Geography: Books and Allied Kolkata
- Ahmad, I. (2018): Baboharik Bhugol, ABJ Publisher, Kolkata



Semester-VI

Course Type	Course Detail		Credits	Marks
	Theory	Practical		
Discipline Core(DC)	-	-	-	-
Discipline Specific Elective (DSE)	DSE3A Hydrology/ Oceanography (04)	DSE3B- Practical (02)	06	50
Skill Enhancement (SEC)	-	-	-	-
General Elective (GE) [For B.A. Only]	GE2A Rural Development (04)	GE2B Practical (02)	06	50

DSE3A: Hydrology (Theory)

Total Credit	04 Credits
Total Marks	35 Marks
• Semester End Examination	25 Marks Mode: Written Examination; Exam. Duration: 2.0 Hours; Question Pattern: Students have to answer <i>One</i> question carrying 10 marks out of <i>Two</i> given questions; <i>Three</i> questions carrying 5 marks each out of given <i>Six</i> questions. Question carrying 10 marks will have at least two parts.
• Internal Assessment	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

Hydrology

1. Modes of occurrence of water in the earth, Hydrological Cycle,
2. Runoff: Factors affecting runoff, transpiration and infiltration process
3. Ground water: Concept and types of aquifers, movement, storage
4. Rain water harvesting processes.

References

1. Linsley, K., Kohler, M. and Paulhus, J.L. (1975): Applied Hydrology, Tata McGraw Hill, New York.
2. Meinzer, O.E. (1942): Hydrology, Dover Publication Inc. New York.
3. Rahgunath, H.M. (1997): Hydrology- Principles, analysis, Design, New Age International Pvt. Ltd, New Delhi
4. Todd, D.K. (1959): Ground Water Hydrology, John Wiley and Sons, New York
5. Walton, W.C. (1970): Ground Water Resource Evaluation, McGraw Hill, Tokyo
6. Karanth, K.R. (1988): Ground Water: Exploration, Assessment and Development, TataMcGraw Hill, New Delhi.

DSE3B- Practical

Total Credit	02 Credits
Total Marks	15 Marks
• Semester End Examination	15 Marks Mode: Laboratory based Examination; Exam. Duration: 1.5 Hours

**List of practical**

1. Construction of Normal and Annual hydrograph
2. Calculation and construction of Rating curve

References

1. Sarkar,A. (1997): Practical Geography: A systematic approach, Orient Longman Ltd, Hyderabad
2. Saha, P.K. and Basu P. (2004):Advanced Practical Geography: Books and Allied Kolkata
3. Ahmad, I.(2018): Baboharik Bhugol, A BJ Publisher, Kolkata

DSE3A: Oceanography (Theory)

Total Credit	04 Credits
Total Marks	35 Marks
• Semester End Examination	25 Marks Mode: Written Examination; Exam. Duration: 2.0 Hours; Question Pattern: Students have to answer One question carrying 10 marks out of Two given questions; Three questions carrying 5 marks each out of given Six questions. Question carrying 10 marks will have at least two parts.
• Internal Assessment	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

Oceanography

1. Characteristics and features of ocean floor
2. Physical properties of sea-water with reference to Temperature, Salinity and Density,
3. Causes and significance of ocean currents.
4. Origin and characteristics of coral reefs and atolls

References

1. Garrison T. (1998): Oceanography An Invitation To Marine Science, Wordsworth Company, Belmont.
2. Pinet P. R. (2008): Invitation to Oceanography (Fifth Edition), Jones and Barlett Publishers, USA, UK and Canada.
3. Sharma, R.C. and Vatal, M. (1980): Oceanography for Geographers, Chaitanya Publishing House, Allahabad.
4. Chowdhury, S.K. (2017): Samudhra Bhugol, New Central Book Agency, Kolkata
5. Sverdrup, H.U. (1942): The Oceans, their Physics, Chemistry and General Biology, PrenticeHall, New York.
6. Bhattachariya Chakrovorty,(2018): Adhunik Bhujolbidya o Samudravidya, New Central Book Agency, Kolkata

DSE3B- Practical

Total Credit	02 Credits
Total Marks	15 Marks
• Semester End Examination	15 Marks Mode: Laboratory based Examination; Exam. Duration: 1.5 Hours

List of practical

1. Construction of hydrograph and Rating curve
2. Calculation and construction of Temperature-Salinity (TS) diagram.

Reference

1. Sarkar,A. (1997): Practical Geography: A systematic approach, Orient LongmanLtd, Hyderabad



2. Saha, P.K. and Basu P. (2004):Advanced Practical Geography: Books and Allied Kolkata
3. Ahmad, I.(2018): Baboharik Bhugol, A B J Publisher, Kolkata

GE2A: Rural Development (Theory)**[To be opted by students from other disciplines only]**

Total Credit	04 Credits
Total Marks	35 Marks
• Semester End Examination	25 Marks Mode: Written Examination; Exam. Duration: 2.0 Hours; Question Pattern: Students have to answer One question carrying 10 marks out of Two given questions; Three questions carrying 5 marks each out of given Six questions. Question carrying 10 marks will have at least two parts.
• Internal Assessment	10 Marks Mode: Written test relevant theoretical aspects as directed by the Department)

Rural Development

1. Concept of Rural Development: Inter-linkages of Urban and Rural Sectors of the Economy; Need for Rural Development, Gandhian Approach of Rural Development.
2. Rural Economic Base: Panchayatiraj System, Agriculture and Allied Sectors, Seasonality; Need for Expanding, Non-Farm Activities, Co-operatives, Self-help groups.
3. Area Based Approach to Rural Development: Flood and Drought Prone Area Programmes, PMGSY.
4. Target Group Approach to Rural Development: SJSY, MNREGA, Jan Dhan Yojana .

Reference:

1. Gilg A. W., (1985): An Introduction to Rural Geography, Edwin Arnold, London.
2. Krishnamurthy, J. (2000): Rural Development - Problems and Prospects, Rawat Publs., Jaipur
3. Lee D. A. and Chaudhri D. P. (eds.), (1983): Rural Development and State, Methuen, London.
4. Misra R. P. and Sundaram, K. V. (eds.), (1979): Rural Area Development: Perspectives and Approaches, Sterling, New Delhi.
5. Misra, R. P. (ed.), (1985): Rural Development: Capitalist and Socialist Paths, Vol. 1, Concept, New Delhi.
6. Palione M., (1984): Rural Geography, Harper and Row, London.
7. Ramachandran H. and Guimaraes J.P.C., (1991): Integrated Rural Development in Asia – Learning from Recent Experience, Concept Publishing, New Delhi.
8. Robb P. (ed.), (1983): Rural South Asia: Linkages, Change and Development, Curzon Press.
9. Singh. K. (2016): Rural Development: Principle, Policies and management, Sage Publication
10. Hossain, T. Et al. (2018): Fundamental of Rural Development, IK international Publishing House PVT.LTD

GE2B: Rural Development Practical

Total Credit	02 Credits
Total Marks	15 Marks
• Semester End Examination	15 Marks Mode: Laboratory based Examination; Exam. Duration: 1.5 Hours

List of practical

1. Crop Combination (Weaver & Rafiullah), Nearest Neighbour Analysis.
2. Residual Map, Egrograph

References

1. Adhakary,S.(2013): Honours Bayboharik Bhugol, Dove Publishing House , Kolkata
2. Sarkar,A. (1997): Practical Geography: A systematic approach, Orient Longman Ltd, Hyderabad
3. Saha, P.K. and Basu P. (2004):Advanced Practical Geography: Books and Allied Kolkata
4. Ahmad, I.(2018): Baboharik Bhugol, A B J Publisher, Kolkata