Syllabus for

BA/B.Sc.(Regular) Geography

Choice Based Credit System (CBCS)

Course effective from the academic year 2019-20

This is approved in the Academic Council held on 8/11/2019

GAUHATI UNIVERSITY
Guwahati-781014
June, 2019

Credit and marks distribution scheme for CBCS curriculum in Geography, Regular Course

Semester	Course Type	Paper Code	Paper Name	Credits	Full Marks
Semester I Marks 400 Credit 22	Compulsory paper (for Arts Stream)	ENG-CC-1016	English Compulsory paper	6	100
	Ability enhancement Course	ENG-AE-1014/ ASM-AE-1014	English Communication Paper, Assamese/ MIL Communication paper	4	100
	Regular Core (Geography)	GGY-RC-1016	Physical Geography (Theory and Practical)	4+2=6	100
	Regular Core 1(other subject)	YYY-RC-1016	Subject Y	6	100
	Regular Core 2(other subject) for science stream	ZZZ-RC-1016	Subject Z	6	100
Semester II Marks 400 Credit 22	Compulsory paper (for Arts Stream)	ENG-CC-2016	English Compulsory paper	6	100
	Ability enhancement Course	ENV-AE-2014	Environmental Science	4	100
	Regular Core (Geography)	GGY-RC-2016	Human Geography	4+2	100
	Regular Core 1(other subject)	YYY-RC-2016	Subject Y	6	100
	Regular Core 2(other subject) for science stream	ZZZ-RC-2016	Subject Z	6	100
Semester III Marks 400 Credit 22	Compulsory paper (for Arts Stream)	ASM - CC – 3016	Assamese/MIL Compulsory paper	6	100
	(any one)	ALT- CC- 3016	Alternative English Compulsory Paper	6	100
	Regular Core (Geography)	GGY - RC - 3016	Economic Geography	4+2	100
	Regular Core 1(other subject)	YYY-RC-3016	Subject Y	6	100

	Regular Core 2(other subject) for science stream	ZZZ-RC-3016	Subject Z	6	100
	Skill Enhancement Course (Any one)	GGY-SE-3024	Regional Development and Planning	2+2	100
		GGY-SE-3034	Thematic Cartography	2+2	100
Semester IV Marks 400 Credit 22	Compulsory paper (for Arts Stream)	ASM - CC – 4016	Assamese/MIL Compulsory paper	6	100
	(any one)	ALT- CC- 4016	Alternative English Compulsory paper	6	100
	Regular Core (Geography)	GGY - RC - 4016:	Geography of India with special reference to N.E. India	4+2	100
	Regular Core 1(other subject)	YYY-RC-4016	Subject Y	6	100
	Regular Core 2(other subject) for science stream	ZZZ-RC-4016	Subject Z	6	100
	Skill Enhancement Course (Any one)	GGY-SE-4024	Remote Sensing Techniques and GIS	2+2	100
		GGY-SE4034	GIS	2+2	100
Semester V Marks 400 Credit 22	Discipline Specific Elective 1	GGY - RE - 5026:	Environmental Geography and Disaster Management	4+2	100
	Discipline Specific Elective 2	GGY - RE - 5036:	Cartographic and Quantitative Techniques	4+2	100
	Discipline Specific Elective 3 (Generic Elective for Stream)	GGY - RE - 5046:	Population and settlement Geography	4+2	100
	Skill Enhancement Course (Any one)	GGY-SE-5014	Surveying Techniques	2+2	100
		GGY-SE-5024	Geography of Tourism	2+2	100
Semester VI	Discipline Specific Elective 1	GGY-RE-6026:	Social and Political Geography	4+2	100

Marks 400 Credit 22	Discipline Specific Elective 2	GGY-RE-6036:	Geography of Resources and Development	4+2	100
	Discipline Specific Elective 3 (Generic Elective for Arts Stream)	GGY-RE-6046:	Disaster Management	4+2	100
	Skill Enhancement Course (Any One)	GGY-SE-6014	Field Techniques and Project work	2+2	100
		GGY-SE-6024	Spatial Information Technology	2+2	100

Syllabus for
BA/B.Sc.(Regular) Geography
Choice Based Credit System (CBCS)

Course effective from the academic year 2019-20

1st Semester

This is approved in the Academic Council held on 8/11/2019

GAUHATI UNIVERSITY
Guwahati-781014
June, 2019

Class 1 Hour 1	Duration	Credit
1 Theory Class	1 Hour	1
1 Tutorial Class	1 Hour	1
1 Practical Class	2 Hours	1

Credit and marks distribution scheme for CBCS curriculum in Geography, Regular Course

Semester	Course Type	Paper Code	Paper Name	Credits	Full Marks
Semester I Marks 400 Credit 22	Compulsory paper (for Arts Stream)	ENG-CC-1016	English Compulsory paper	6	100
	Ability enhancement Course	ENG-AE-1014/ ASM-AE-1014	English Communication Paper, Assamese/ MIL Communication paper	4	100
	Regular Core (Geography)	GGY-RC-1016	Physical Geography (Theory and Practical)	4+2=6	100
	Regular Core 1(other subject)	YYY-RC-1016	Subject Y	6	100
	Regular Core 2(other subject) for science stream	ZZZ-RC-1016	Subject Z	6	100

Subject	Semester	Paper type	Paper Code	Paper name	Total Marks	Marks Distribution					Paper Credit
						External			Internal		
						Theory	Practical	Sessional	Practical /Assignments	Attendance	
Geography	1	Regular Core	GGY-RC-1016	Physical Geography * (Theory + Practical)	100	60	20	10	6	4	4+2=6

Core Course

CBCS-based U.G. Course in Geography, 2019
Syllabus of Regular Core Paper

Course Name: Physical Geography
Paper Code: GGY-RC-1016

Course objectives

- To provide a general idea about the topographic and surficial characteristics of the earth's surface to the students.
- To make the students aware of the dynamic geomorphic processes responsible for the development of landforms of varied types and nature.
- To impact applied scientific knowledge on landform development based on geomorphic concepts, principles and theories.

Specific outcomes

- The students will learn that the earth is unstable and it is undergoing constant changes due to dynamic earth's processes.
- The students will come to know about the meaning and scope of geomorphology, which a major branch of Physical Geography.
- After gaining knowledge based on the contents embodied in this paper, the students will be able to realize the importance of geomorphological knowledge as applied in various developmental activities executed on the land and over the earth's surface.

Part A (Theory)

Credit 4 (40 Classes)

1. Physical Geography – Definition and Scope, Components of Earth System. **(8 classes)**
2. Atmosphere – Composition and the vertical structure, Heat Balance, Global Circulation Pattern, Monsoon, Koppen's Climatic Classification. **(12 classes)**
3. Lithosphere – Internal Structure of Earth based on Seismic Evidence **(8 classes)**
4. Endogenetic and Exogenetic processes, Works of River, Fluvial Cycle of Erosion – Davis **(12 classes)**

Part B (Practical)

2 Credit (20 classes of two hour duration each)

1. Relief representation from the topographical sheet (v-shaped valley, u-shaped valley, conical hill, cliff, uniform slope) (10 Classes) **(12 Assignments)**
2. Profile Drawing (Serial and superimposed) (8 Classes) **(4 Assignments)**
3. Rainfall-Temperature Graph, Climograph and Hythergraph (4 Classes) **(6 Assignments)**
4. Practical Note book 2 marks
5. Viva-voce 2 marks

Reading List

1. Conserva H. T., 2004: Illustrated Dictionary of Physical Geography, Author House, USA.
2. Gabler R. E., Petersen J. F. and Trapasso, L. M., 2007: Essentials of Physical Geography (8th Edition), Thompson, Brooks/Cole, USA.
3. Garrett N., 2000: Advanced Geography, Oxford University Press.
4. Goudie, A., 1984: The Nature of the Environment: An Advanced Physical Geography, Basil Blackwell Publishers, Oxford.
5. Hamblin, W. K., 1995: Earth's Dynamic System, Prentice-Hall, N.J.
6. Husain M., 2002: Fundamentals of Physical Geography, Rawat Publications, Jaipur.
7. Monkhouse, F. J. 2009: Principles of Physical Geography, Platinum Publishers, Kolkata.
8. Strahler A. N. and Strahler A. H., 2008: Modern Physical Geography, John Wiley & Sons, New York.

Syllabus for
BA/B.Sc.(Regular) Geography
Choice Based Credit System (CBCS)

Course effective from the academic year 2019-20

IInd Semester

This is approved in the Academic Council held on 8/11/2019

GAUHATI UNIVERSITY

Guwahati-781014

June, 2019

Class 1 Hour 1	Duration	Credit
1 Theory Class	1 Hour	1
1 Tutorial Class	1 Hour	1
1 Practical Class	2 Hours	1

Credit and marks distribution scheme for CBCS curriculum in Geography, Regular Course

Semester	Course Type	Paper Code	Paper Name	Credits	Full Marks
Semester II Marks 400 Credit 22	Ability enhancement Course	ENV-AE-2014	Environmental Studies	4	100
	Regular Core (Geography)	GGY-RC-2016	Human Geography (Theory and Practical)	4+2=6	100
	Regular Core 1(other subject)	YYY-RC-2016	Subject Y	6	100
	Regular Core 2(other subject) for science stream	ZZZ-RC-2016	Subject Z	6	100

Subject	Semester	Paper type	Paper Code	Paper name	Total Marks	Marks Distribution					Paper Credit
						External		Internal			
						Theory	Practical	Sessional	Practical /Assignments	Attendance	
Geography	II	Regular Core	GGY-RC-2016	HumanGeography * (Theory + Practical)	100	60	20	10	6	4	4+2=6

Core Course

CBCS-based U.G. Course in Geography, 2019

Syllabus of Regular Core Paper

Course Name: Human Geography
Paper Code: GGY-RC-2016

Course objectives

- This paper is a core paper that intends to introduce students to human geography and how humankind transforms and gets transformed by geographic space.
- It seeks to develop new insights among students on the relevance of human-environmental relationships and how a spatial perspective shapes these relationships.

Course outcomes

- The paper will be useful for students in developing ideas on human-environment issues that geographers usually address in the anthropocene
- The paper will be useful for students preparing for UGC NET/SLET exams and other competitive exams including the civil services.

Part A (Theory)

4 Credit (40 classes)

1. Field of human geography: meaning, scope and importance. **(8 classes)**

2. Concepts of man-environment relationship: Determinism and Possibilism. **(8 classes)**

3. Impact of environment on man; impact of man on environment; population growth and environmental changes; house types in different environmental conditions. **(10 classes)**

4. Global patterns of racial, religious and linguistic composition of population. **(7 classes)**

5. Origin, growth and characteristics of rural and urban settlements; Patterns of rural settlements; Patterns of urbanization in India and N.E. India. **(7 classes)**

Part B (Practical)

2 Credit (20 classes of two hour duration each)

1. Traditional house types of selected ethnic groups of North-East India. (4 classes)

(1 assignment)

2. Trend of population growth in the world in relation to five most populous countries of the world using line graph. . (4 classes) **(1 assignment)**
3. Religious composition of population in the world and three most populous countries of the world using pie-graph. (4 classes) **(2 assignments)**
4. Spatial patterns of urban population in Assam and N.E. India at state level through choropleth map. (4 classes) **(2 assignments)**
5. Drawing of major rural settlement types/patterns; Morphological diagram of a village and a town (preferably based on student's own village and town). (4 classes) **(3 assignments)**
6. Practical Note book 2 marks
7. Viva-voce 2 marks

Reading List

1. Chandna, R.C. (2010) Population Geography, Kalyani Publisher.
2. Hassan, M.I. (2005) Population Geography, Rawat Publications, Jaipur
3. Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver & Boyd, London.
4. Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography,
5. Blackwell Publication.
6. Jordan-Bychkov et al. (2006) The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York.
7. Kaushik, S.D. (2010) Manav Bhugol, Rastogi Publication, Meerut.
8. Maurya, S.D. (2012) Manav Bhugol, Sharda Pustak Bhawan. Allahabad.
9. Hussain, Majid (2012) Manav Bhugol. Rawat Publications, Jaipur

Syllabus for
BA/B.Sc.(Regular) Geography
Choice Based Credit System (CBCS)

Course effective from the academic year 2019-20

IIIrd Semester

This is approved in the Academic Council held on 8/11/2019

GAUHATI UNIVERSITY

Guwahati-781014

June, 2019

Class 1 Hour 1	Duration	Credit
1 Theory Class	1 Hour	1
1 Tutorial Class	1 Hour	1
1 Practical Class	2 Hours	1

Credit and marks distribution scheme for CBCS curriculum in Geography, Regular Course

Semester	Course Type	Paper Code	Paper Name	Credits	Full Marks
Semester III Marks 400 Credit 22	Compulsory paper (for Arts Stream)	ASM - CC – 3016	Assamese/MIL Compulsory paper	6	100
	(any one)	ALT- CC- 3016	Alternative English Compulsory Paper	6	100
	Regular Core (Geography)	GGY - RC - 3016	Economic Geography (Theory + Practical)	4+2	100
	Regular Core 1(other subject)	YYY - RC - 3016	Subject Y	6	100
	Regular Core 2(other subject) for science stream	ZZZ - RC - 3016	Subject Z	6	100
	Skill Enhancement Course (Any one)	GGY-SE-3014	Regional Development and Planning (Theory + Practical)	2+2	100
		GGY-SE-3024	Thematic Cartography (Theory + Practical)	2+2	100

Subject	Semester	Paper type	Paper Code	Paper name	Total Marks	Marks Distribution					Paper Credit
						External		Internal			
						Theory	Practical	Sessional	Practical /Assignments	Attendance	
Geography	III	Regular Core	GGY-RC-3016	Economic Geography * (Theory + Practical)	100	60	20	10	6	4	4+2=6
Geography	III	Skill Enhancement Course	GGY-SE-3014	Regional Development and Planning * (Theory + Practical)	100	60	20	10	6	4	2+2=4
Geography	III	Skill Enhancement Course	GGY-SE-3024	Thematic Cartography * (Theory + Practical)	100	60	20	10	6	4	2+2=4

Core Course

CBCS-based U.G. Course in Geography, 2019

Syllabus of Regular Core Paper

Course Name: Economic Geography
Paper Code: GGY-RC–3016

Course Objective:

- This is a regular core paper with a view to make the students understand the basic principles of economic geography and associated patterns and processes of major economic activities in the world.
- It seeks to develop insights among the students about the relevance of studying economic geography and understanding contemporary economic problems from geographical perspective.

Course Outcomes:

- This paper will be useful for the students in developing understanding on how geographical factors organize economic space, and to acquire knowledge about spatial patterns of various economic activities on the earth.

Part A (Theory)
Credit 4 (40 classes)

1. Meaning and scope of Economic Geography. **(3 classes)**
2. Economic activity: meaning and classification; Production system: Role of land, labour and capital; Resource: Concept and classification. **(6 classes)**
3. Agriculture: Factors influencing agriculture; types of agriculture; Factors influencing cultivation of wheat, rice and tea, and their distribution and production in the world. **(10 classes)**
4. Manufacturing: Factors influencing industrial location; types of industry; Factors, distribution and production of iron and steel and cotton textile industry in the world. **(10 classes)**
5. Transport system: Modes of transport, factors influencing transport development and role of transport in resource mobilization and industrial development. **(6 classes)**
6. Trade: Factors influencing trade; Trade relations of India with the countries like Bhutan, Nepal and Bangladesh. **(5 classes)**

Part B (Practical)

Credit 2 (20 classes of two hour duration each)

1. Trend of rice, wheat and iron & steel production in the world/India since 1960 using moving average method. (5 classes) **(3 assignments)**
2. Trend of production of wheat, rice, maize and barley in the world/India since 1960 using Band-graph. (4 classes) **(2 assignments)**
3. Trend of balance of trade relations (export and import value) of India with Bangladesh, Nepal and Bhutan in respect of major commodities since 1990 using Bar-graph. (4 classes) **(2 assignments)**

4. Regional variation in fertilizer consumption and agricultural productivity in rice, wheat and barley in selected countries of the world using Bar-graph. (3 classes) **(1 assignment)**

5. Inter-state and Inter-nation volume of movement of selected commodities through flow cartogram. (4 classes) **(2 assignments)**

6. Practical Note book 2 marks

7. Viva-voce 2 marks

Reading List

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
10. Saxena, H.M., 2013: Economic Geography, Rawat Publications, Jaipur.

Skill Enhancement Course

CBCS-based U.G. Course in Geography, 2019
Syllabus of Skill Enhancement Paper

Course Name: Regional Planning and Development
Paper Code: GGY – SE-3014

Course Objectives

- This is a skill paper for geography regular students with a view to introduce students to the rationale underlying the relevance of regional planning for balanced regional development.
- It seeks to develop new insights among students on the issue of development and disparities among geographical regions.

Course Outcomes

- The paper will be useful for students in developing ideas on disparities within and between countries and their fallout.
- The paper will help provide theoretical insights and perspectives to students if they wish to pursue a research programme in future.

Part A (Theory)
Credit 2 (20 classes)

1. Concept of region and regional development; types of region (formal, functional and ad-hoc); concept of regionalization. **(4 Classes)**
2. Regional development planning and its need; levels of regional planning (macro, meso and micro). **(4 Classes)**
3. Characteristics of an ideal planning region; Planning regions of India with special reference to Agro-Ecological regions. **(3 Classes)**
4. Theories and models in regional planning: Growth Pole Model of Perroux; Friedmann's core-preiphery model; Myrdal's cumulative causation theory; Rostow's growth model and their relevance in Indian context. **(5 Classes)**
5. Concept of development and measuring development; Indicators for measuring development level (Economic, Social and Environmental); Human Development Index; Role of NEC in the development of north-east region. **(4 Classes)**

Part B (Practical)

Credit 2 (20 classes of two hour duration each)

1. Regionalization using methods of (a) Overlapping of different themes and (b) Ranking using mean and standard deviation. (4 classes) **(3 Assignments)**
2. Demarcation of functional (urban influence) zone using Reilly's breaking point formula. (3 classes) **(1 Assignment)**
3. Mapping regional disparity in socio-economic development in India at state/UT level using Simple Composite Index and Ranking Index (3 classes) **(2 Assignments)**
4. Determination of road network connectivity of North-East India (state level) and Assam (regional level) using alpha, beta and gamma indices. (3 classes) **(2 Assignments)**
5. Identification of resource rich and resource poor regions in N.E. India (state level) based on availability of selected major resources in relation to population using simple composite index and ranking index. (3 classes) **(2 Assignments)**
6. Mapping regional variation in level of agricultural development in N.E. India (at state level)/Assam (district level) using ranking index. (4 classes) **(2 Assignments)**

Reading List

1. Blij H. J. De, 1971: *Geography. Regions and Concepts,* John Wiley and Sons.
2. C1ava1 P.1, 1998: *An Introduction to Regional Geography,* Blackwell Publishers, Oxford and Massachusetts.
3. Friedmann, J. and Alonso, W. (1975): *Regional Policy - Readings in Theory and Applications,* MIT Press, Massachusetts.
4. Gore C. G., 1984: *Regions in Question. Space, Development Theory and Regional Policy,*
5. Methuen, London.
6. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: *Questioning Development; Essays on the Theory, Policies and Practice of Development Intervention,* Metropolis-Verlag, Marburg.
7. Haynes J., 2008: *Development Studies,* Polity Short Introduction Series.
8. Johnson E. A. J., 1970: *The Organization ofspace in Developing Countries,* MIT Press, Massachusetts.
9. Peet R., 1999: *Theories ofDevelopment,* The Guilford Press, New York.
10. UNDP 2001-04: *Human Development Report,* Oxford University Press.
11. World Bank 2001-05: *World Development Report,* Oxford University Press, New

Skill Enhancement Course

CBCS-based U.G. Course in Geography, 2019
Syllabus of Skill Enhancement Course

Course Name: Thematic cartography
Paper Code: GGY – SE-3024

Course objectives

This course on thematic cartography provides a general understanding of methods and techniques and importance in geographic study. It more particularly focuses on various themes of cartographic techniques; principles of different types of symbols, methods for preparation of maps or plan in different environment and representation of various features of the earth's surface using different cartographic techniques.

Course outcomes

- Understanding the importance of various techniques of preparation of maps in geographical study
- General understanding of preparation of different types of plan and maps.
- An acquaintance of different cartographic techniques for representation of various facets of earth's surface

Thematic Cartography - Part A (Theory)

Credit: 2 (20 classes)

1. Thematic cartography: meaning and importance **(3 classes)**
2. Thematic Mapping: Principles and techniques of representation of physical and human geographic data (point, line, polygon) **(4 classes)**
3. Concepts and principles of cartographic overlay and mapping **(4 classes)**
4. Concept of base map; map types; map reading; map design, layout and typography **(5 classes)**
5. Techniques of interpretation of Topographical maps, satellite imageries and aerial photographs for thematic mapping. **(4 classes)**

Thematic Cartography - Part B (Practical)

Credit 2 (20 classes of two-hour duration each)

1. Preparation of an administrative/physical map of India containing necessary map elements using appropriate typography. (3 classes) **(1 Assignment)**

2. Preparation of thematic maps for representing human geographic data using choropleth, isopleth, dot, sphere and proportionate circle techniques. (7 classes) **(5 Assignments)**
3. Interpretation of topographical maps for preparation of thematic maps through overlay method (taking point, line and area layers) to show relationship between relief and agriculture; and relief, drainage and settlements**.** (4 classes) **(2 Assignments)**
4. Locational accessibility mapping based on travel time through isochronic cartogram. (3 classes) **(1 Assignment)**
5. Preparation of landuse/landcover map through visual interpretation of satellite imagery using appropriate classification scheme. (3 classes) **(1 Assignment)**

6. Practical Note book 2 marks
7. Viva-voce 2 marks

Reading List

1. Anson R. and Ormelling F. J., 1994: *International Cartographic Association: Basic Cartographic Vol.,* Pergaman Press.
2. Gupta K.K. and Tyagi, V. C., 1992: *Working with Map*, Survey of India, DST, New Delhi.
3. Misra R.P. and Ramesh, A., 1989: *Fundamentals of Cartography*, Concept, New Delhi.
4. Monkhouse F. J. and Wilkinson H. R., 1973: *Maps and Diagrams*, Methuen, London.
5. Rhind D. W. and Taylor D. R. F., (eds.), 1989: *Cartography: Past, Present and Future*, Elsevier, International Cartographic Association.
6. Robinson A. H., 2009: *Elements of Cartography*, John Wiley and Sons, New York.
7. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers.
8. Sarkar, A. (2015) *Practical Geography: A Systematic Approach*. Orient Black Swan Private Ltd., New Delhi
9. Singh, L.R., 2013: *Fundamentals of Practical Geography*, ShardaPustakBhawan, Allahabad.
10. Talukder, S., 2008: *Introduction to Map Projections*, EBH Publishers (India), Guwahati.

Syllabus for
BA/B.Sc.(Regular) Geography
Choice Based Credit System (CBCS)

Course effective from the academic year 2019-20

4th Semester

This is approved in the Academic Council held on 8/11/2019

GAUHATI UNIVERSITY

Guwahati-781014

June, 2019

CBCS-based U.G. Course in Geography, 2019

Syllabus of Regular Core Course

Course Name: Geography of India and NE India

Paper Code: GGY-RC-4016

Course objectives

- This is a core paper which intends to introduce students to India as a geographical entity.
- It seeks to develop new insights among students on significant geographical dimensions of the country along with its north-eastern part.
- A field study is incorporated to make the students understand regional diversity of India with respect to its land, people and economy.

Course outcome

- The paper will be useful for students in developing understanding on Indian geography and its various dimensions.
- It will also be useful for students preparing for UGC NET/SLET examinations along with civil services and other competitive examinations.

Part A: Theory
Credit: 4
(40 classes of 1 hour duration each)

1. India's location and its significance; administrative divisions. **(2 classes)**
2. Physical setting: Physiographic divisions and their characteristics; Climate and its seasonal and regional characteristics; vegetation; soil types and its distribution. **(8 classes)**
3. Population: Trend of growth, spatial variation in growth and distribution; Age and sex composition; Linguistic and religious composition. **(6 classes)**
4. Agriculture: Regional distribution and production patterns of rice, wheat and millet. **(4 classes)**
5. Industry: Distribution and production patterns of iron and steel, cotton textile and fertilizers; Role of transport system in industrial development. **(6 classes)**
6. North-East India: Land of seven sisters and its locational significance; physiographic framework; forest cover; agricultural practices including shifting cultivation; industrial development scenario; population growth, distribution and ethnic composition. **(14 classes)**

Part B: Practical
Credit: 2
(20 classes of 2 hour duration each)

Unit 1: 10 marks (2 Questions of 5 marks each)

1. Trend of population growth and growth rates in India and N.E. India since 1901 using Census data (Source: censusindia.gov.in) **(2 assignments)**
2. Choropleth mapping to show spatial variation in decennial population growth rate in India. **(1 assignment)**
3. Spatial variation in the patterns of religious composition of population in India and Social composition of population (SC, ST and General) in N.E. India using pie-graph. **(2 assignments)**
4. Trend of foodgrains production (rice, wheat, maize, barley, jowar and bajra) in India since 1950-51 using band-graph. **(1 assignment)**
5. Map showing distribution of major tribal groups in North-East India **(1 assignment)**

Unit 2: 6 Marks (4+2)

6. Preparation of field report based on field study of observational knowledge about the geographical personality of any part of India/N.E. India under the guidance of teacher(s).

Unit 3: 4 Marks (2+2)

7. Practical Note-book and viva-voce.

Reading List:

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 Intenational 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. Pathak, C. R. 2003: Spatial Structure and Processes of Development in India. Regional Science Assoc., Kolkata.

11. Tiwari, R.C. (2007) Geography of India. Prayag Pustak Bhawan, Allahabad
12. Sharma, T.C. (2013) Economic Geography of India. Rawat Publication, Jaipur
13. Bhagabati, A.K., Bora, A. K. and Kar, B.K.: Geography of Assam, Rajesh Publications, New Delhi.
14. Taher, M and Ahmed, P.: Geography of North East India, Mani Manik Prakash, Guwahati.
15. Das, M..M.: Peasant Agriculture in Assam, Inter – India Publications, New Delhi.
16. Gopal Krishnan, R : Geography of North East India
17. Bhattacharya, P.2006 : Trend in Tourism Potentiality, Bani Mandir, Guwahati
18. Bhagabati, A.K. (ed) : Biodiversity of Assam, Eastern Book House, Guwahati
19. Bhattacharyya, N.N. : North East India, Rajesh Publication, New Delhi
20. Srivastava, S.C., : Demographic Profile of N.E. India, Mittal Publications

CBCS-based U.G. Course in Geography, 2019
Syllabus of Skill Enhancement Course

Course Name: Remote Sensing Techniques and GIS
Paper Code: GGY - SE - 4014

Course objectives

- This is a practical paper that intends to introduce students to the art and science of remotely sensing data and the possible ways and means of interpreting spatial data
- It seeks to develop new insights among students on the use of remotely sensed data in a rapidly changing world.

Course outcomes

- The paper will equip students with technical skills in data interpretation and analysis when using remote sensing data.
- The paper will be useful for students seeking employment in the public/private sector in agencies using spatial/remote sensing datasets.

Remote Sensing (Practical)

1. Remote Sensing: Definition and Development; Platforms and Types; Photogrammetry.
2. Satellite Remote Sensing: Principles, EMR Interaction with Atmosphere and Earth Surface; Satellites (Landsat and IRS); Sensors
3. Image Processing (Digital and Manual): Pre-processing (Radiometric and Geometric Correction); Enhancement (Filtering); Classification (Supervised and Un-supervised)
4. Satellite Image Interpretation.
5. Application of Remote Sensing: Land Use Land Cover.

Practical Record: A project file consisting of 5 exercises on using any method on above mentioned themes.

Reading List

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

6. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).
7. Li, Z., Chen, J. and Batsavias, E. (2008) Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences CRC Press, Taylor and Francis, London
8. Mukherjee, S. (2004) Textbook of Environmental Remote Sensing, Macmillan, Delhi.
9. Nag P. and Kudra, M., 1998: *Digital Remote Sensing*, Concept, New Delhi.
10. Singh R. B. and Murai S., 1998: *Space-informatics for Sustainable Development*, Oxford and IBH Pub.

CBCS-based U.G. Course in Geography, 2019
Syllabus of Skill Enhancement Course

Course Name: Geographical Information System
Paper Code: GGY - SE - 4024

Course objectives

- This paper will introduce students to use geographic data within a GIS
- It seeks to develop new insights among students on the relevance of geo-spatial datasets in various studies and varied analyses.

Course outcomes

- The paper will equip students with technical skills in data interpretation and analysis when using geo-spatial data and databases.
- The paper will be useful for students seeking employment in the public/private sector in agencies using geo-spatial datasets and databases.

Geographical Information System (Practical)

1. Geographical Information System (GIS): Definition and Components.
2. Global Positioning System (GPS) – Principles and Uses; DGPS.
3. GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure.
4. GIS Data Analysis: Input; Geo-Referencing; Editing, Output and Query; Overlays.
5. Application of GIS: Land Use Mapping; Urban Sprawl Analysis; Forests Monitoring.

Practical Record: A project file consisting of 5 exercises on using any GIS Software on above mentioned themes.

Reading List

1. Bhatta, B. (2010) Analysis of Urban Growth and Sprawl from Remote Sensing,Springer, Berlin Heidelberg.41
2. Burrough, P.A., and McDonnell, R.A. (2000) Principles of Geographical Information System Spatial Information System and Geo-statistics. Oxford University Press
3. Chauniyal, D.D. (2010) Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda Pustak Bhawan, Allahabad
4. Heywoods, I., Cornelius, S and Carver, S. (2006) An Introduction to Geographical Infromation system. Prentice Hall.
5. Jha, M.M. and Singh, R.B. (2008) Land Use: Reflection on Spatial Informatics

Agriculture and Development, New Delhi: Concept.

6. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.
7. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
8. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.

Syllabus for
BA/B.Sc.(Regular) Geography
Choice Based Credit System (CBCS)

Course effective from the academic year 2019-20

5th Semester

This is approved in the Academic Council held on 8/11/2019

GAUHATI UNIVERSITY

Guwahati-781014

June, 2019

CBCS-based U.G. Course in Geography, 2019

Syllabus of Discipline Specific Elective

Course Name: Environmental Geography and Disaster management
Paper Code: GGY - SE - 4016

Course objectives

- This paper is a core paper that intends to introduce students to geography and environment interface
- It seeks to develop new insights among students on the relevance of environmental studies from a spatial perspective.

Course outcomes

- The paper will be useful for students in developing ideas on environmental issues that geographers usually address
- The paper will be useful for students preparing for UGC NET/SLET exams and other competitive exams including the civil services.

Environmental Geography

1. Environmental Geography – Concept, Scope and Significance
2. Human-Environment Relationships – Historical Progression, Adaptation in different Biomes.
3. Eco-system: concept, types and components, structure and functions; Ecology– Concept and principles.
4. Major Global Environmental Problems: Pollution, Deforestation, Desertification, Global Warming, Bio-Depletion
5. Environmental Programmes and Policies – Global, National and Local

Reading List

1. Chandna R. C., 2002: *Environmental Geography*, Kalyani, Ludhiana.
2. Cunninghum W. P. and Cunninghum M. A., 2004: *Principals of EnvironmentalScience: Inquiry and Applications*, Tata Macgraw Hill, New Delhi.
3. Goudie A., 2001: *The Nature of the Environment*, Blackwell, Oxford.
4. Singh, R.B. (Eds.) (2009) Biogeography and Biodiversity. Rawat Publication, Jaipur

5. Miller G. T., 2004: *Environmental Science: Working with the Earth,* Thomson BrooksCole, Singapore.
6. MoEF, 2006: *National Environmental Policy-2006,* Ministry of Environment and Forests, Government of India.
7. Singh, R.B. and Hietala, R. (Eds.) (2014) Livelihood security in Northwestern Himalaya: Case studies from changing socio-economic environments in Himachal Pradesh, India. Advances in Geographical and Environmental Studies, Springer
8. Odum, E. P. et al, 2005: *Fundamentals of Ecology,* Ceneage Learning India.
9. Singh S., 1997: *Environmental Geography,* Prayag Pustak Bhawan. Allahabad.
10. UNEP, 2007: *Global Environment Outlook: GEO4: Environment For Development,* United Nations Environment Programme.
11. Singh, M., Singh, R.B. and Hassan, M.I. (Eds.) (2014) Climate change and biodiversity: Proceedings of IGU Rohtak Conference, Volume 1. Advances in Geographical and Environmental Studies, Springer
12. Singh, R.B. (1998) Ecological Techniques and Approaches to Vulnerable Environment, New Delhi, Oxford & IBH Pub..
13. Singh, Savindra 2001. *Paryavaran Bhugol,* Prayag Pustak Bhawan, Allahabad. (in Hindi)

CBCS-based U.G. Course in Geography, 2019

Syllabus of Discipline Specific Elective

Course Name: Cartographic and Quantitaitive Techniques
Paper Code: GGY - SE - 4026

Credit 4 (40 classes)

1. Cartography – Meaning, Development (Traditional and Modern Cartography) and Importance of Cartography in Geography. **(8 classes)**
2. Shape and size of the earth, coordinate system (latitude and longitude) **(8 classes)**
3. Maps: Types, scale and content, representation of point, line and area in maps **(8 classes)**
4. Quantification and its significance in geographical study; advantages and limitations of quantitative methods in geography. **(4 classes)**
5. Geographical Data: Nature, types and sources; scale of measurement (nominal, ordinal, interval and ratio). **(4 classes)**
6. Measures of central tendency (mean, median and mode) and dispersion (range, quartile deviation, mean deviation, standard deviation and coefficient of variation) and their applications in geographical data analysis. **(8 classes)**

Reading List

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 Publs. Co., New Delhi.
5. Mukherjee, Neela 2002. Participatory Learning and Action: with 100 Field Methods. Concept Publs. Co., New Delhi
6. 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.

7. Special Issue on "Doing Fieldwork" *The Geographical Review* 91:1-2 (2001).
8. Stoddard R. H., 1982: *Field Techniques and Research Methods in Geography*, Kendall/Hunt.
9. Wolcott, H. 1995. The Art of Fieldwork. Alta Mira Press, Walnut Creek, CA.

CBCS-based U.G. Course in Geography, 2019
Syllabus of Discipline Specific Elective (Arts Stream)

Course Name: Population and Settlement Geography
Paper Code: GGY - HC - 4036

Credit: 6
Total Marks 100
(Theory: 60, Practical: 20 and Internal Assessment: 20)

Unit I

Population Geography

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

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

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

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

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

UNIT II: Settlement Geography

6 Definition, Nature and scope, Criteria for delimitation.

7. Urban Settlements: Census categories, Metropolitan concept, City-region and Conurbation, Urban Landuse .

8. Urban Landuse and Morphology: Classical models - Burgess, Homer-Hoyt, Harris and Ullman

9. Rural Settlements: Site and situation, nature and characteristics, Types and patterns of rural settlement * Classification of rural settlements, Morphology of rural settlement in the Indian context

10.Regional Settlement Hierarchy: Primate City, Rank-Size Rule, Central Place Theory

11. Settlement Classification based on situation and functions *, Method of functional classification by Harris and Nelson

Reading List

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., 2000: *Population Geography,* 3rd ed. Paul Chapman, London.
6. Lutz W., Warren C. S. and Scherbov S., 2004: *The End of the World Population Growth in the 21st Century*, Earthscan
7. Newbold K. B., 2009: *Population Geography: Tools and Issues*, Rowman and Littlefield Publishers.
8. Pacione M., 1986: *Population Geography: Progress and Prospect*, Taylor and Francis.
9. Wilson M. G. A., 1968: *Population Geography*, Nelson.
10. Panda B P (1988): Janasankya Bhugol, M P Hindi Granth Academy,Bhopal
11. Maurya S D (2009) Jansankya Bhugol, Sharda Putak Bhawan, Allahabad
12. Chandna, R C (2006), Jansankhya Bhugol, Kalyani Publishers, Delhi

CBCS-based U.G. Course in Geography, 2019
Syllabus of Skill Enhancement Techniques

Course Name: Surveying Techniques
Paper Code: GGY – SE-4014
Total Credit: 4
Total Marks 100
(Theory: 60, Practical: 20 and Internal Assessment: 20)

Course objectives

This course on Surveying Techniques provides a general understanding of the field of survey including its modern tools and importance in geographic study. It more particularly focuses on various types of survey instruments; principles of different types of surveying, methods of carrying out survey for preparation of plan in different environment and representation of various objects in the plan.

Course outcomes

- Understanding the importance of various surveying techniques in geographical study.
- General understanding of preparation of different types of plan and map.
- An acquaintance of different surveying techniques for representation of various objects of earth's surface.

Surveying techniques

Part A: (Theory) Credit 2 (40 classes)

1. Surveying: Meaning and importance; Principles of surveying - plane and geodetic surveying; Principles of triangulation.
2. Principles and techniques of surveying by Plane Table, Prismatic Compass and Dumpy Level.
3. Principles of radiation, intersection, traversing, contouring and leveling.
4. GPS: Basic concept, principles and utilities.
5. Total Station and its utilities in surveying.

Surveying Techniques

Part B: (Practical) Credit 2
(20 classes of two-hour duration each)

1. Preparation of a plan or a map of an area within the college campus or any suitable area using plane table (Radiation & Intersection methods) (2 Assignments)
2. Traverse Surveying with Prismatic Compass: Open and Closed Traverse and preparation of plan (adjustment of closing errors using Bowditch's rule) (2 Assignments)

3. Closed Traverse Surveying with Theodolite: Plotting of data for preparation of a plan through computation of Reduced Bearing, Consecutive Co-ordinates and Independent Co-ordinates.
   (1 Assignment)
4. Profile levelling and contouring in a selected area by Dumpy Level
   (2 Assignments)

Reading List:

1. Campbell, J., 1984: Introductory Cartography, Prentice Hall Inc., Englewood Cliff
2. Misra, R.P. and Ramesh, A., 1995: Fundamentals of Cartography, Concept Publishing Company, New Delhi
3. Robinson, A.H., et al: Elements of Cartography, John Wiley & Sons, New York
4. Raisz, E. : Principles of Cartography, McGraw Hills, London
5. Kenetkar, T.P. and Kulkarni, S.U.: Surveying and Levelling, Vol. I & II, VidyarthiGrithaPrakashan, Pune

CBCS-based U.G. Course in Geography, 2019
Syllabus of Skill Enhancement Techniques

Course Name: Geography of Tourism
Paper Code: GGY – SE-4024
Total Credit: 4
Total Marks 100
(Theory: 60, Practical: 20 and Internal Assessment: 20)

Course Objectives

(a) This paper introduces students to the field of tourism from the lens of a geographer and its specificities

(b) It seeks to develop new insights among students on how tourism and allied activities are shaped by geography of an area, region or country and also how such activities are responsible in shaping economic, social and environmental context from globe to local levels.

Course Outcomes

- The paper will be useful for students in developing ideas on how geographical factors tangent on tourism activities and how geographers seek to address issues of development and carrying capacities of varied environments. It will also build skills for students seeking to enroll in a research programme and/or provide openings for them to work with tourism/eco-tourism planning agencies.

Part A: Theory
Credit: 4

(40 classes of 1 hour duration each)

1. Scope and Nature: Concepts and Issues of tourism, Recreation and leisure inter-relations; Geographical parameters of tourism as postulated by Robinson (4 classes)

2. Type of Tourism: Nature Tourism, Cultural Tourism, Medical Tourism, Pilgrimage (6 classes)

3. Recent Trends of Tourism: International and Regional; Domestic (India); Eco-Tourism, Sustainable Tourism, Meetings Incentives Conventions and Exhibitions (MICE) (12 classes)

4. Impact of Tourism: Economy; Environment; Society (6 classes)

5. Tourism in India: Tourism Infrastructure; Case Studies of tourism development in Himalaya,
Desert, North East India with special reference to Assam and Coastal Areas of India; National
Tourism Policy (12 classes)

Part B: Practical
Credit: 2

(20 classes of 2 hour duration each)

1. Trend of growth of tourist arrivals in the world/India/ Assam since 1960 using moving average method. (3 assignments)

2. Trend of tourist arrivals in the north eastern states of India since 1980 in comparison to a top ranking tourist arriving state of India using Band-graph. (2 assignments)

3. Show the climatic aspect of tourism by relating rainfall, temperature and tourist arrival data for any year or a specific period for any two north eastern states of Assam by using appropriate carto-statistical technique. (2 assignments)

4. Prepare a map of Assam and show important tourist destinations along with their road, railway and air connectivity/ Prepare a tourist map of NE India to show important national parks and sanctuaries from tourism point of view. (2 assignments)

5. Using GPS, prepare a trekking map using suitable conventional signs and symbols (1 assignments)

Reading List

1. Bhattacharya, P. (2011): Tourism in Assam: Trend and Potentialities, Bani mandia, Guwahati

2. Dhar, P.N. (2006) International Tourism: Emerging Challenges and Future Prospects. Kanishka, New Delhi.

3. Hall, M. and Stephen, P. (2006) Geography of Tourism and Recreation – Environment, Place and Space, Routledge, London.

4. Kamra, K. K. and Chand, M. (2007) Basics of Tourism: Theory, Operation and Practise, Kanishka Publishers, Pune.

5. Page, S. J. (2011) Tourism Management: An Introduction, Butterworth-Heinemann-USA. Chapter 2.

6. Raj, R. and Nigel, D. (2007) Morpeth Religious Tourism and Pilgrimage Festivals

Management: An International perspective by, CABI, Cambridge, USA, www.cabi.org.

7. Tourism Recreation and Research Journal, Center for Tourism Research and Development, Lucknow

8. Singh Jagbir (2014) "Eco-Tourism" Published by - I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India (www.ikbooks.com).

9. Market Research Division, Dept. of Tourism, Govt. of India, India Tourist Statistics (available in PDF form), New Delhi

10. UNWTO: Tourism Barometer (available in their web portal to have a fresh glimpse of global tourism statistics/ other relevant sites may also be consulted)

Syllabus for
BA/B.Sc.(Regular) Geography
Choice Based Credit System (CBCS)

Course effective from the academic year 2019-20

6th Semester

This is approved in the Academic Council held on 8/11/2019

GAUHATI UNIVERSITY

Guwahati-781014

June, 2019

CBCS-based U.G. Course in Geography, 2019

Discipline Specific Elective
Course Name: Social and Political Geography
Paper Code: GGY-HG-6016
Credit: 6
Total Marks 100
(Theory: 60, Practical: 20 and Internal Assessment: 20)

Unit I : Social Geography

1. Social Geography: Concept, Origin, Nature and Scope.
2. Peopling Process of India: Technology and Occupational Change; Migration.
3. Social Categories: Caste, Class, Religion, Ethnicity and Gender and their Spatial distribution
4. Geographies of Welfare and Well being: Concept and Components – Healthcare, Housing and Education.
5. Social Geographies of Inclusion and Exclusion, Slums, Gated Communities, Communal Conflicts and Crime.

Unit II
Political Geography

1. Introduction: Concepts, Nature and Scope.
2. State, Nation and Nation State – Concept of Nation and State, Attributes of State – Frontiers, Boundaries, Shape, Size, Territory and Sovereignty, Concept of Nation State; Geopolitics; Theories (Heartland and Rimland)
3. Electoral Geography – Geography of Voting, Geographic Influences on Voting pattern, Geography of Representation, Gerrymandering.
4. Political Geography of Resource Conflicts – Water Sharing Disputes, Disputes and Conflicts Related to Forest Rights and Minerals.
5. Politics of Displacement: Issues of relief, compensation and rehabilitation: with reference to Dams and Special Economic Zones

Reading List

Ahmed A., 1999: *Social Geography*, Rawat Publications.

Casino V. J. D., Jr., 2009) *Social Geography: A Critical Introduction*, Wiley Blackwell.

Cater J. and Jones T., 2000: *Social Geography: An Introduction to Contemporary Issues*, Hodder Arnold.

Holt L., 2011: *Geographies of Children, Youth and Families: An International Perspective,* Taylor & Francis.

Panelli R., 2004: *Social Geographies: From Difference to Action*, Sage.

Rachel P., Burke M., Fuller D., Gough J., Macfarlane R. and Mowl G., 2001: *Introducing Social Geographies,* Oxford University Press.

Smith D. M., 1977: *Human geography: A Welfare Approach*, Edward Arnold, London.

Smith D. M., 1994: *Geography and Social Justice*, Blackwell, Oxford.

Smith S. J., Pain R., Marston S. A., Jones J. P., 2009: *The SAGE Handbook of Social Geographies*, Sage Publications.

Sopher, David (1980): *An Exploration of India*, Cornell University Press, Ithasa

Valentine G., 2001: *Social Geographies: Space and Society*, Prentice Hall.

Agnew J., 2002: *Making Political Geography,* Arnold.

Agnew J., Mitchell K. and Toal G., 2003: *A Companion to Political Geography*, Blackwell.

Cox K. R., Low M. and Robinson J., 2008: *The Sage Handbook of Political Geography*, Sage Publications.

Cox K., 2002: *Political Geography: Territory, State and Society*, Wiley-Blackwell

Gallaher C., et al, 2009: *Key Concepts in Political Geography*, Sage Publications.

Glassner M., 1993: *Political Geography*, Wiley.

Jones M., 2004: *An Introduction to Political Geography: Space, Place and Politics*, Routledg

.

Mathur H M and M M Cernea (eds.) Development, Displacement and Resettlement – Focus on Asian Experience, Vikas, Delhi

Painter J. and Jeffrey A., 2009: *Political Geography*, Sage Publications.

Taylor P. and Flint C., 2000: *Political Geography*, Pearson Education.

Verma M K (2004): Development, Displacement and Resettlement, Rawat Publications, Delhi

Hodder Dick, Sarah J Llyod and Keith S McLachlan (1998), *Land Locked States of Africa and Asia* (vo.2), Frank Cass

CBCS-based U.G. Course in Geography, 2019

Discipline Specific Elective

Course Name: Geography of Resources and Development

Paper Code: GGY-HG-6026

Credit: 6

Total Marks 100

(Theory: 60, Practical: 20 and Internal Assessment: 20)

Course objectives

This theory course basically deals with concept of resource and its classification, and the distribution, utilization and management of land, water, forest and energy resources. It also focuses on the natural resource base of North-East India and its problems of conservation and management. Besides, it also provides basic idea about sustainable development of resources.

Course outcomes

- Understanding the basic concept of resource and its various types and their utilities
- Acquiring basic information about potentials and management of resources like land, water, forest and power in global context.
- Understanding the prevailing natural resource potential of North-East India and problems of management.

Resource Geography

1. Natural Resource: Concept and Classification
2. Distribution, Utilisation, Problems and Management of Land Resources and Water Resources
3. Distribution, Utilisation, Problems and Management of Forests and Energy Resources
4. Appraisal and Conservation of Natural Resources in North-East India
5. Sustainable Resource Development

Reading List

1. Cutter S. N., Renwich H. L. and Renwick W., 1991: *Exploitation, Conservation, Preservation: A Geographical Perspective on Natural Resources Use*, John Wiley and Sons, New York.

2. Gadgil M. and Guha R., 2005: *The Use and Abuse of Nature: Incorporating This Fissured Land: An Ecological History of India and Ecology and Equity*, Oxford University Press. USA.

3. Holechek J. L. C., Richard A., Fisher J. T. and Valdez R., 2003: *Natural Resources: Ecology, Economics and Policy*, Prentice Hall, New Jersey.

4. Jones G. and Hollier G., 1997: *Resources, Society and Environmental Management*, Paul Chapman, London.

5. Klee G., 1991: *Conservation of Natural Resources*, Prentice Hall, Englewood.

6. Mather A. S. and Chapman K., 1995: *Environmental Resources*, John Wiley and Sons, New York.

7. Mitchell B., 1997: *Resource and Environmental Management*, Longman Harlow, England.

8. Owen S. and Owen P. L., 1991: *Environment, Resources and Conservation*, Cambridge University Press, New York.

9. Rees J., 1990: *Natural Resources: Allocation, Economics and Policy*, Routledge.London.

CBCS-based U.G. Course in Geography, 2019

Discipline Specific Elective

Course Name: Disaster Management

Paper Code: GGY - HG - 6036

Course objectives

- To provide students an exposure to disasters, their significance and types on Spatio-temporal dimensions.
- To develop basic ability to respond to their surroundings with potential disaster response in areas where they live, with due sensitivity
- To provide information and knowledge about how disasters can be checked and managed.

Course outcomes

- The students will be able to analyse the causes and management issues related to disasters taking place in students' own localities.
- The students will be able to differentiate the types of disasters, causes and their impact on environment and society along with various disaster management strategies and their applicability in different situations.

Disaster Management Part-A (Theory) Credit -4 (40 Classes)

1. Meaning and Definition: Hazard, Disaster and Vulnerability; Types of Disasters- Flood, Land Slide and Mass Movement, Cyclone, Drought, Earthquake and Tsunami, Volcanic eruptions, Avalanche, Famines (10 Classes)
2. Classification of Disaster: Manmade and Natural disasters; Their Causes, Processes and impact on land and People (8 Classes)
3. Disasters in India: Types and Geographical Dimensions with special reference to Assam
   (8 Classes)
4. Approaches to Disaster Risk Reduction: Mitigation and Preparedness, Role of UNDP, NDMA, NIDM and ADMA; Do's and Don'ts Pre During and Post Disasters Indigenous Knowledge and Community-Based Disaster Management; (8 Classes)
5. Reciprocal Relationship of Development and Disaster ; Sustainable Disaster Management (6 Classes)

Disaster Management Part-B (Practical) Credit -2

(20 Classes of 2 hours Duration Each)

1. Mapping of world and India Distributions of Disaster (2 Assignments)
2. Cartographic representation of major disasters India and Assam at least 30 years (2 Assignments)
3. Preparation of flood hazard zonation map of India/Assam (2 Assignments)
4. Representation of fault, thrusts and earth quake zonation map of North East India

(1 Assignment)

5. Preparation of Potential Tsunamigenic map of World/India (2 Assignments)
6. Mapping of world Major and Minor Plates (1 Assignment)

Reading List

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and GeologicalDisasters, Macmillan, Delhi.
4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
8. Singh Jagbir (2007) "Disaster Management Future Challenges and Opportunities", 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India (www.ikbooks.com).

CBCS-based U.G. Course in Geography, 2019

Syllabus of Skill Enhancement Course

Course Name: Field techniques and Project work

Paper Code: GGY-SE-6014

Course objectives: The paper **Field techniques and Survey based Project Report** is of pedagogical importance as it lets students acquire the first hand experience about the geography of a particular region. It also help to gather required information so as the problem under investigation is studied in depth as per the predefined objectives.

Course outcome:

- This course will help students to proceed with a research problem and the steps she/he should adopt and the tools and craft to be employed which doing quality research.
- Students perceive fieldwork to be beneficial to their learning because through it they experience 'geographical reality', have deeper understanding of the subject,
- The students will have a chance to interact with respondents and collect data through questionnaire directly from the field.
- Develop understanding about designing and writing a field report.

Field Techniques and Survey based Project Report

1. Field Work in Geographical Studies – Role, Value and Ethics of Field-Work.

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

3. Field Techniques – Merits, Demerits and Selection of the Appropriate Technique; Observation (Participant / Non Participant).

4. Data collection, processing and analysis methods and chapter plan.

5. Questionnaires (Open/ Closed / Structured / Non-Structured); Interview with Special Focus on Focused Group Discussions; Space Survey (Transects and Quadrants, Constructing a Sketch).

6. Designing the Field Report – Statement of the problem, Significance of the problem of the study, 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 duration of the field work should not exceed 10 days.

3. The word count of the report should be about **8000 to 12,000** excluding figures, tables, photographs, maps, references and appendices.

4. One copy of the report on A 4 size paper should be submitted in soft binding.

Reading List

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 Publs. Co., New Delhi.

5. Mukherjee, Neela 2002. Participatory Learning and Action: with 100 Field Methods. Concept Publs. Co., New Delhi

6. 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.

7. Special Issue on "Doing Fieldwork" *The Geographical Review* 91:1-2 (2001).

8. Stoddard R. H., 1982: *Field Techniques and Research Methods in Geography*, Kendall/Hunt.

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CBCS-based U.G. Course in Geography, 2019

Syllabus of Skill Enhancement Course

Course Name: Spatial Information Technology

Paper Code: GGY-HG-6026

Credit: 6

Total Marks 100

(Theory: 60, Practical: 20 and Internal Assessment: 20)

Course objectives

1. This paper seeks to introduce students to use of spatial information as a methodology

2. It seeks to develop new insights among students on the relevance of geo-spatial data using specific software, tools and techniques.

Course outcomes

1. The paper will be helpful for students in developing ideas on possible applications to solving geo-referenced data in research.

2. The paper will be useful for students seeking openings/entry in public/private sector organisations using spatial data.

Spatial Information Technology

1. Introduction: Definitions, Concept and Historical Development

2. Spatial Information/Data: Web data sources; Registration and projection; Data structures; Data interpolation and modeling.

3. Working of spatial information system

4. Functions of Spatial information system: Information retrieval; Topological modeling; Networks; Overlay; Data output.

5. Application of Spatial Information Technology

Reading List

1. C. Esperança and H. Samet, An overview of the SAND spatial database system, to appear in Communications of the ACM, 1997. http://www.cs.umd.edu/~hjs/pubs/sandprog.ps.gz

2. G. Hjaltason and H. Samet, Ranking in Spatial Databases in Advances in Spatial Databases —4 th Symposium, SSD'95, M. J. Egenhofer and J. R. Herring, Eds., Lecture Notes in Computer Science 951, Springer-Verlag, Berlin, 1995, 83-95. http://www.cs.umd.edu/~hjs/pubs/incnear.ps

3. H. Samet, Spatial Data Structures in Modern Database Systems: The Object Model, Interoperability, and Beyond, W. Kim, Ed., Addison-Wesley/ACM Press, 1995, 361-385. http://www.cs.umd.edu/~hjs/pubs/kim.ps B.A./B.Sc. (Honours) Geography - CBCS 93

4. H. Samet, Applications of Spatial Data Structures: Computer Graphics, Image Processing, and GIS, Addison-Wesley, Reading, MA, 1990. ISBN 0-201- 50300-0.

6. H. Samet, The Design and Analysis of Spatial Data Structures, Addison-Wesley, Reading, MA, 1990. ISBN 0-201-50255-0.

7. H. Samet and W. G. Aref, Spatial Data Models and Query Processing in Modern Database Systems: The Object Model, Interoperability, and Beyond, W. Kim, Ed., AddisonWesley/ACM Press, 1995, 338-360. http://www.cs.umd.edu/~hjs/pubs/kim2.ps

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