Guru Jambheshwar University of Science &Technology, Hisar-125001, Haryana
(A+ NAAC Accredited State Govt. University)

Department of Geography

Scheme of Examination and Syllabus for

Under Graduate Programme

For affiliated Degree Colleges

Subject: Geography

Under Multiple Entry-Exit, Internship and

CBCS-LOCF as per NEP-2020

w.e.f. session 2024-25 (in phased manner)

Guru Jambheshwar University of Science and Technology
Hisar-125001, Haryana
('A+' NAAC Accredited State Govt. University)

Name of the Programme: Bachelor of Arts

Subject: Geography

Scheme of Examination & Syllabus for affiliated Degree College for UG Programme
According to National Education Policy-2020

FIRST YEAR

SEMESTER-I								
Type of Course	**Course Code**	**Nomenclature of Paper/Course**	**Credits**	**Contact Hours**	**Internal Marks**	**External Marks**	**Total Marks**	**Duration of Exam (Hrs)**
Discipline Specific Course	C24GEO101T	Geography of India	3	3	20	50	70	2.5
	C24GEO101P	Geography of India Lab	1	2	10	20	30	2
Minor Course	C24MIC109T	General Geography of India	2	2	15	35	50	2
Multi-disciplinary Course	C24MDC114T	General Geography	3	3	25	50	75	2.5
Skill Enhancement Course	C24SEC109T	Surveying Techniques	2	2	15	35	50	2
	C24SEC109P	Surveying Techniques Lab	1	2	10	15	25	2
SEMESTER-II								
Type of Course	**Course Code**	**Nomenclature of Paper/Course**	**Credits**	**Contact Hours**	**Internal Marks**	**External Marks**	**Total Marks**	**Duration of Exam (Hrs)**
Discipline Specific Course	C24GEO201T	Human Geography (T)	3	3	20	50	70	2.5
	C24GEO201P	Human Geography Lab	1	2	10	20	30	2
Minor Course	C24MIC209T	Geography of Haryana	2	2	15	35	50	2
Multi-disciplinary Course	C24MDC214T	Physical Geography of India	3	3	25	50	75	2.5
Skill Enhancement Course	C24SEC209T	Interpretation of Maps and Toposheets	2	2	15	35	50	2
	C24SEC209P	Interpretation of Maps and Toposheets Lab	1	2	10	15	25	2

Program Outcomes (PO) with Under-Graduate Attributes

Programme outcomes are attributes of the under graduates from the programme that are indicative of the under graduates' ability and competence to work after being a qualified person upon graduation. Program outcomes are statements that describe what students are expected to know or do by the time of graduation, they must relate to knowledge and skills that the students acquire from the programme. The achievement of all outcomes indicates that the student is well prepared to achieve the program educational objectives down the road. The department of geography has the following eleven PO's. The course syllabi and the overall curriculum have been designed to achieve these outcomes:

PO1	Knowledge	Capable of demonstrating comprehensive disciplinary knowledge gained during course of study
PO2	Communication	Ability to communicate effectively on general and scientific topics with the scientific community and with society at large
PO3	Problem Solving	Capability of applying knowledge to solve scientific and other problems
PO4	Investigation of Problems	Ability of critical thinking, analytical reasoning and research- based knowledge including design of experiments, analysis and interpretation of data to provide conclusions
PO5	Modern Tool usage	Ability to use and learn techniques, skills and modern tools for scientific practices
PO6	Life-Long Learning	Aptitude to apply knowledge and skills that are necessary for participating in learning activities throughout life

Geography
Geography of India (Semester I)
Discipline Specific Course (DSC)

Course Code: C24GEO101T **External Marks :** 50
45 Hrs. (3 Hrs./Week) **Internal Marks :** 20
Credit : 3 **Total Marks:** 70
Exam Time: 2.5 Hrs.

Note: The maximum time duration for attempting the paper will be of 2.5 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more questions will be set, two questions from each unit. The students shall be required to attempt four questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks i.e. 12.5 marks.

Objective*:* To introduce the students with Physical, Natural, Demographic, Economic and Developmental elements of India.

Unit-I **15 Hrs**

1. Physiology of India: Location, relief, and drainage system.
2. Climate, soils, natural vegetation, and natural disasters in India.

Unit-II **10 Hrs**

3. Population: distribution, density, growth and composition.
4. Green Revolution in India; Production and Distribution of crops: Rice, Wheat, Cotton and Sugarcane.

Unit-III **10 Hrs**

5. Energy resources: coal, petroleum, hydroelectricity, solar, and nuclear energy.
6. Mineral resources: iron ore, manganese, aluminum, and mica.

Unit-IV **10 Hrs**

7. Industrial regions of India and Industries- iron and steel, cotton textile, sugar.
8. Transport and communication, Modes of transport: Road, Railway, Water.

Geography of India Lab

Course Code: C24GEO101P **Marks for External: 20**
30 Hrs (2 Hrs/week) **Marks for Internal: 10**
Credit: 1 **Total Marks: 30**
Time: 2 Hours

Practical Record: A project file of at least 10 exercises on the below mentioned themes:

1. Drawing of Isopleths (Isotherms and Isobars) on map of India. (2 Exercise)
2. Representation of population distribution (Dot Method) and density (Choropleth) on map of India. (2 Exercise)
3. Representation of age and sex structure. (Pyramid diagram 1 Exercise)
4. Representation of rainfall deviation in India at least for 20 years. (1 exercise)
5. Representation of production (Graphical) and distribution (Map) of crops, mineral and energy resources. (any 2 Exercise)
6. Mapping of modes of transport in India. (any 2 Exercise)

Recommended Books:

1. Deshpande C. D. (1992) India: A Regional Interpretation, ICSSR, New Delhi.
2. Hussain M. (1992) Geography of India, Tata McGraw Hill Education
3. Johnson, B. L. C., ed. (2001) Geographical Dictionary of India. Vision Books, New Delhi.
4. Mamoria C. B. (1980) Economic and Commercial Geography of India, Shiva Lal Agarwala.

5. Mandal R. B. (ed.), (1990) Patterns of Regional Geography – An International Perspective.Vol. 3 – Indian Perspective.
6. Sdyasuk Galina and P Sengupta (1967) Economic Regionalisation of India, Census of India
7. Sharma, T. C. (2003) India - Economic and Commercial Geography. Vikas Publ., New Delhi.
8. Singh R. L. (1971) India: A Regional Geography, National Geographical Society of India.
9. Sharma, T.C. (2013) Economic Geography of India. Rawat Publication, Jaipur
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, RawatPubls., Jaipur & New Delhi.

Course outcomes

At the end of the course, the students would be able to:

CO1. Understand the physiography of India.

CO2. Enable to understand the natural and physical components of India.

CO3. Conceptualization and understanding of demographic situation of India.

CO4. Context of Green Revolution and its impact on major crops of India.

CO5. Provide awareness about the resources, industries and transportation in India.

CO6. Enable students to Represent different geographical data with the help ofgraphical and map tools.

Mapping of CO with PO

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	S	M	S
CO2	S	S	S	M	M	S
CO3	M	M	M	M	M	S
CO4	S	M	S	S	M	M
CO5	M	M	M	M	W	S
CO6	S	S	M	M	M	S

S= strong M= medium W= weak

Geography
General Geography of India (Semester I)
Minor Course (MIC)

Course Code: C24MIC109T **External Marks : 35**
30 Hrs. (2 Hrs./Week) **Internal Marks : 15**
Credit : 2 **Total Marks: 50**
Exam Time: 2 Hrs.

Note: The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more questions will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit consisting of 10 marks each in addition to compulsory Question No. 1.

Objective: To introduce the students with Physical, Natural, Demographic, Economic and Developmental elements of India.

Unit-I **15 Hrs**

1. India: Origin, Size, Location and Boundaries.
2. Physical landscape of India.
3. Drainage system and climate.
4. Soil and natural vegetation.

Unit-II **15 Hrs**

5. Population of India : Distribution, Density, Growth,Age and Sex Composition
6. Urbanization in India Industrial regions of India and Industries- iron and steel, cotton textile, sugar.

Recommended Books:

1. Sdyasuk Galina and P Sengupta (1967) Economic Regionalization of India, Census of India
2. Hussain M. (1992): Geography of India, Tata McGraw Hill Education.
3. Mamoria C. B. (1980): Economic and Commercial Geography of India, Shiva Lal Agarwal Publisher
4. Nag P. and Sengupta S. (1992), Geography of India, Concept Publishing.
5. Pichamuthu C. S. (1967), Physical Geography of India, National Book Trust.
6. Sharma T. C. and Coutinho O (1997), Economic and Commercial Geography of India, Vikas Publishing.
7. Singh Gopal (1976) A Geography of India, Atma Ram & Sons. Publication
8. Spate O. H. K. and Learmonth A. T. A., 1967: India and Pakistan: A General and Regional Geography, Methuen.
9. Rana, Tejbir Singh (2015) Diversity of India, R.K. Books, Delhi.

Khullar, D.R. (2006) , India: A Comprehensive Geography, Kalyani Publication

Course outcomes

At the end of the course, the students would be able to:

CO1. Understand the location, geographical expansionand physiography of India
CO2. Attain the knowledge of the drainage system andclimate of India.
CO3. Study the socio- cultural attributes of Indianpopulation
CO4. Internalize the concept of unity in diversity of our country.

Mapping of CO with PO

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	M	S
CO2	S	S	M	M	M	S
CO3	M	M	M	M	M	M
CO4	S	S	M	M	M	S

S= strong M= medium W= weak

Geography
General Geography (Semester I)
Multi-Disciplinary Course (MDC)

Course Code: C24MDC114T **External Marks : 50**
45 Hrs (3 Hrs/Week) **Internal Marks : 25**
Credit : 3 **Total Marks: 75**
Exam Time: 2.5 Hrs

Note: The maximum time duration for attempting the paper will be of 2.5 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more questions will be set, two questions from each unit. The students shall be required to attempt four questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks i.e. 12.5 marks.

Objective: To introduce the students with Solar system, Physical, Natural elements of India.

Unit-I **15 Hrs**

1. Geography: Meaning and definition, branches; relation of geography with other disciplines.
2. Solar system, Origin of earth, Interiorof Earth
3. Basic concepts of Earth Movement: Rotation and revolution; Formation of days, nights and seasons.
4. Latitudes & longitudes and Time Zone of the World

Unit-II **15 Hrs**

5. Weathering: definitions and classification; Types of rocks: Igneous, Sedimentary and Metamorphic.
6. Endogenic movement : Earthquake and Volcan

Unit-III **15 Hrs**

7. Composition and structure of atmosphere, temperature and Atmospheric Pressure.
8. Winds systems, precipitation and Cyclones

Recommended Books:

1. Barry, R.G.and Chorley, R.J. (1998) Atmosphere and Climate, Routledge, London.
2. Critchfield, H. (2002) General Climatology, Prentice-Hall of India Pvt. Ltd., New Delhi.
3. Hussain, Majjid (2006) World Geography, Rawat Publishers, New Delhi.
4. Pounds and Taylor (1974) Word Geography, South Western Publishing Company,Ohio.
5. Sharma, H.S. (1980) Perspectives in Geomorphology, Concepts, New Delhi.
6. Singh, S. (2006) Physical Geography, Pravalika Publications, Allahabad.
7. Sparks, B.W. (1960) Geomorphology, Longman, London.
8. Trewartha, G.T. (1981) an Introduction to Climate, Mc-Graw Hill, New York.
9. Singh L. R. (2016) Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
10. Sarkar, A. (2015) Practical geography: A systematic approach, Orient Black
    a. Swan Private Ltd., New Delhi.
11. Robinson, A.H., et. al. (1995) Elements of Cartography, John Wiley, New York.
12. Sharma, J.P. (2016) Prayogik Bhugol, Rastogi Publications, Meerut.

Course outcomes

At the end of the course, the students would be able to:
CO1. Attain a systematic knowledge of geography.
CO2. Acquire a comprehensive knowledge about earth and its major phenomena.
CO3. Understand the geographical concepts which are relevant in day- to-day life.

Mapping of CO with PO

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	M	M	S
CO2	S	S	M	M	M	S
CO3	M	M	M	M	M	M

S= strong M= medium W= weak

Geography
Surveying Techniques (Semester I)
Skill Enhancement Course (SEC)

Course Code: C24SEC109T **External Marks :** 35
30 Hrs. (2 Hrs./Week) **Internal Marks :** 15
Credit : 2 **Total Marks:** 50
Exam Time: 2 Hrs.

Note: The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more questions will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit consisting of 10 marks each in addition to compulsory Question No. 1.

Objectives: To introduce the students with Different types of Survey techniques and importance of Survey in Geography.

Unit –I **15 Hrs**

1. Definition and importance of survey; method of surveying; primary division of survey; classification of survey.
2. Types of survey based on instruments and method.
3. Chain and tape survey: instruments, method and importance of chain and tape survey.

Unit- II **15 Hrs**

4. Plane table survey: instruments, types of plane table survey and importance of plane table survey.
5. Prismatic compass survey: instruments, method and importance of prismatic compass survey.
6. Contemporary relevance of Surveying Techniques in Geography.

Surveying Techniques in Geography (Lab)

Course Code: C24SEC109P **Marks for External: 15**
30 Hrs (2 Hrs/week) **Marks for Internal: 10**
Credit: 1 **Total Marks: 25**
Time: 2 Hours

A project file consisting of 8 exercises on the below mentioned themes:

1. Chain and tape survey: Traverse Method (2 exercises).
2. Plane table survey: Radiation Method, Intersection Method and Traverse Method (3 exercises).
3. Prismatic compass survey: Radiation Method, Intersection Method and Traverse Method (3 exercises).

Recommended Readings:

1. Misra, R.P. and Ramesh, A. 1999. Fundamentals of Cartography, Concept Publishing Company, New Delhi
2. Monkhouse, F.J. and Wilkinson, H.R. 1980. Maps and Diagrams. B. I. Publications, New Delhi.
3. Singh, R.L (2005) Elements of Practical Geography. Kalyani Publishers, New Delhi. India.
4. Sharma, J.P. (2016) PrayogikBhugol, Rastogi Publications, Meerut.
5. Sarkar, A. (2015) Practical geography: A systematic approach, Orient Black Swan Private Ltd., New Delhi.
6. Robinson, A.H., et. al. (1995) Elements of Cartography, John Wiley, New York.
7. Dent, B.D. (1999) Cartography: Thematic Map Design, (Vol. 1), McGraw Hill.
8. Gupta, K.K. and Tyagi, V.C (1992) Working with Maps, Survey of India, DST, New Delhi.
9. Singh, G (2005) Map work and practical geography. Vikas Publishing House Pvt.Ltd.,New Delhi
10. Misra, R.P. and Ramesh, A. 1999. Fundamentals of Cartography, Concept Publishing Company, New Delhi
11. Monkhouse, F.J. and Wilkinson, H.R. 1980. Maps and Diagrams. B. I. Publications, New Delhi.
12. Singh, R.L (2005) Elements of Practical Geography. Kalyani Publishers, New Delhi. India.

Course outcomes

At the end of the course, the students would be able to:

CO1. Understand Different types of Survey techniques.
CO2. Enable to understand methods of survey techniques.

Mapping of CO with PO

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	S	S	S
CO2	S	S	S	M	S	S

S= strong M= medium W= weak

Geography
Human Geography (Semester II)
Discipline Specific Course (DSC)

Course Code: C24GEO201T **External Marks :** 50
45 Hrs. (3 Hrs./Week) **Internal Marks :** 20
Credit : 3 **Total Marks:** 70
Exam Time: 2.5 Hrs.

Note: The maximum time duration for attempting the paper will be of 2.5 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more questions will be set, two questions from each unit. The students shall be required to attempt four questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks i.e. 12.5 marks.

Objectives: To introduce the students with Concepts of Human-environment relationships, Population distribution and settlements.

Unit –I **12 Hrs**

1. Introduction: Definition, nature and scope of human geography; Historical perspective of human geography.
2. Approaches to study human geography and contemporary relevance of human geography.

Unit- II **12 Hrs**

3. Concept of Human-environment relationship: A historical approach, Human adaptation to the environment (i) Eskimo (ii) Bushman (iii) Gujjar Bakarwals of Himalaya.
4. Space and society: cultural regions; race; tribes

Unit –III **11 Hrs**

5. Population: population growth and distribution; population composition; Malthusian theory of population growth.
6. Population-resource relationships: population-resource regions.

Unit –IV **10 Hrs**

7. Settlements: types of rural settlements; functional classification of urban settlements; trends and patterns of world urbanization.
8. Population pressure and resource use, environment and concept of sustainable development

Human Geography Lab

Course Code: C24GEO201P **Marks for External: 20**
30 Hrs (2 Hrs/week) **Marks for Internal: 10**
Credit: 1 **Total Marks: 30**
Time: 2 Hours

Practical Record:
A project file consisting of 8 exercises on the below mentioned themes: -

1. Chart of major branches of Human Geography (1 exercise)
2. Chart of classification of resources (1 exercise)
3. Composition of major religions and language of the world (2exercises).
4. Flow diagram of migration streams of world population (1excercise).
5. Plotting of isodapane (2 exercises).
6. Spatial and temporal growth of world population (2 exercises).

Socio-Economic Survey and report writing = Internal Assessment

Recommended Books:

1. 1. Agarwal, A et al (1999) The Citizen's Fifth Citizen's Report, Centre for Science & Environment, New Delhi.
2. Alexander, John. W. (1988) Economic Geography, Prentice Hall of India Ltd., New Delhi.
3. Bergwan, Edward E. (1985) Human Geography: Culture Connections and Landscape,Prentice-Hall, New Jersey.
4. Carr, M. Patterns (1987) Process and Change in Human Geography, McMillan Education,London.
5. Carter, H. (1972) The study of Urban Geography, Edward Arnold, London.
6. Chandna, R.C. (2016) A Geography of Population: Concepts, Determinants and Patterns,Kalyani Publishers, New Delhi.
7. DeBlij, H. J. (1996) Human Geography, Culture, Society and Space, John Wiley, NewYork.
8. Fellman, J.L. (1997) Human Geography-Landscapes of Human Activities, Brown andBenchman Pub., USA.
9. Hassan, I. ( ) Population Geography: A Systematic Exposition, Routledge, London.

10. Hussain, M. (2018) Human Geography, Rawat, Publication, Jaipur.
11. McBride, P.J. (1996): Human Geography; Systems Patterns and Change, Nelson, UK andCanada.
12. Michael, C. (1996) New Patterns: Process and Change in Human Geography, Nelson.
13. Qazi, S.A. (2010) Population Geography, APH publishers.
14. Ramachandra, R. (1992) Urbanization and Urban System in India, Oxford, London.
15. Sharma, Y.K. (2017). Human Geography, Narain publishers.
16. Singh, N. (2015) A Text Book of Human Geography, Rajesh Publishing.. International and Transnational Perspectives on Urban Systems.Tokyo, Japan: Springer pages 393.

Course outcomes

At the end of the course, the students would be able to:

CO1. Gain knowledge about the fundamentals of human geography.
CO2. Enhance the knowledge of race and religion.
CO3 understand the organization of space.
CO4. Familiarize with world economic systems.

Mapping of CO with PO

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	M	M	S
CO2	S	S	M	M	M	S
CO3	S	S	M	M	M	S
CO4	M	M	M	M	M	M

S= strong M= medium W= weak

Geography
Geography of Haryana (Semester II)
Minor Course (MIC)

Course Code: C24MIC209T **External Marks : 35**
30 Hrs. (2 Hrs./Week) **Internal Marks : 15**
Credit : 2 **Total Marks: 50**
Exam Time: 2 Hrs.

Note: The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more questions will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit consisting of 10 marks each in addition to compulsory Question No. 1.

Objective: To introduce the students with Physical, Natural, Demographic, Economic and Developmental elements of Haryana.

Unit-I **15 Hrs**

1. Haryana ; size, location , boundaries, relief and Drainage
2. Climate; Distribution Rainfall & Temperature, Monsoon and Climatic Region of Haryana Drainage system and climate.
3. Haryana; Types of Soil; their Characteristics andDistribution
4. Haryana; Types of natural vegetation; their Distribution and Forest Resources.

Unit-II **15 Hrs**

5. Population: distribution, density and growth and Rural-Urban Population.
6. Migration and Urbanization in Haryana
7. Haryana; Major Crops and Green Revolution
8. Haryana; Transport and Trade.

Recommended Books:

1. Census of India (1981) Regional Division in Haryana.
2. Census of India (2001) Administrative Atlas of Haryana.
3. Deshpande CD (1992) India: A Regional Interpretation, ICSSR and Northern Book
4. Singh, Jasbir (1976) Agricultural Geography of Haryana, Vishal Publishers, Kurukshetra.
5. FICCI (2007) State of Infrastructure in Haryana
6. Singh, R.L. (1971) India-A Regional Geography, National Geographical Society, Varanasi

Course outcomes

At the end of the course, the students would be able to:

CO1. Understand the physiography and climate ofHaryana.
CO2. Have knowledge of agriculture and industrialstatus of the state.
CO3. Familiarize with population distribution andliteracy of the state.
CO4. Attain the knowledge of trade and transport of Haryana.

Mapping of CO with PO

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	M	M	S
CO2	S	S	S	M	M	S
CO3	S	S	M	M	M	S
CO4	M	M	M	M	M	S

S= strong M= medium W= weak

Geography
Physical Geography of India (Semester II)
Multi-Disciplinary Course (MDC)

Course Code: C24MDC214T **External Marks : 50**
45 Hrs (3 Hrs/Week) **Internal Marks : 25**
Credit : 3 **Total Marks: 75**
Exam Time: 2.5 Hrs

Note: The maximum time duration for attempting the paper will be of 2.5 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more questions will be set, two questions from each unit. The students shall be required to attempt four questions in all selecting one question from each unit in addition to compulsory Question No. 1. All questions shall carry equal marks i.e. 12.5 marks.

Objective: To introduce the students with Physical, Natural elements of India.

Unit-I **15 Hrs**

1. Geological history, Physical Landscape structure andDivisions of India.
2. The Morphological Regions of India.
3. Drainage system and their Functional Signification.

Unit-II **15 Hrs**

4. Climate: Regional and Seasonal Variation in Rainfall and Temperature; Factors effecting of Indian Climate.
5. Theories of Monsoon origin and Climatic Region of India.

Unit-III **15 Hrs**

6. Natural vegetation: classification, distribution and their Significance
7. Soils: classification, distribution and their characteristics

Recommended Books:

1. Deshpande, C.D. (1992) India-A Regional Interpretation, Northern Book Depot, NewDelhi.
2. Hussain Majid (2015) Geography of India, Mc Graw Hill Education.
3. Shafi, M. (2000) Geography of South Asia, McMillan and Company, Calcutta.
4. Singh, Gopal (2006) Geography of India, Atma Ram and Sons, New Delhi.
5. Singh, R.L. (1971) India: A Regional Geography, National Geographical Society,India, Varanasi.
6. Sharma, J.P. (2016) Prayogik Bhugol, Rastogi Publications, Meerut.
7. Mishra R.P. and Ramesh, A., 1989: Fundamentals of Cartography, Concept, NewDelhi.
8. Monkhouse F. J. and Wilkinson H. R., 1973: Maps and Diagrams, Methuen, London.
9. Singh R. L. and Singh R. P. B., 1999: Elements of Practical Geography, KalyaniPublishers.
10. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi

Course outcomes

At the end of the course, the students would be able to:

CO1 Understand the geological and physiographic Structure of India.
CO2 Enrich skills about drainage system and various Hydrological regimes.
CO3 Understand the climate and its characteristics.
CO4 Acquire knowledge about different types of flora andsoils found in India.
CO5 Attain skills in solving various practical problems Associated with physical aspects of India*.

Mapping of CO with PO

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	M	M	M	M	M	S
CO2	M	M	M	M	M	M
CO3	S	S	S	S	M	S
CO4	M	M	M	M	M	M
CO5	S	S	S	S	M	S

S= strong M= medium W= weak

Geography
Interpretation of Maps and Toposheets (Semester I)
Skill Enhancement Course (SEC)

Course Code: C24SEC209T **External Marks :** 35
30 Hrs. (2 Hrs./Week) **Internal Marks :** 15
Credit : 2 **Total Marks:** 50
Exam Time: 2 Hrs.

Note: The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more questions will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit consisting of 10 marks each in addition to compulsory Question No. 1.

Objectives: To introduce the students with Maps and its distribution Toposheets and its classification.

Unit –I **15 Hrs**

1. Maps; History, Meaning, Definition and Basic concepts of Maps, Techniques of Map-making, Reduction and Enlargement of Maps, Classification and uses of Map.
2. Distribution Maps; Meaning, Definition and Classification. Techniques of thematicmapping: Chorochromatic, Choroschematic, Choropleth, Isopleth, Dot method and Diagrammatic Methods.

Unit –II **15 Hrs**

3. Toposheet Maps; History, Meaning and Classification, Toposheets maps of Indiaand neighborhood countries.
4. Basic information on Topographical sheets, Preliminary information, ConventionalSigns, Interpretation of Relief, Drainage, Settlements, Land-use, Vegetation and Transport network on toposheets. Uses of Toposheets in various field

Interpretation of Maps and Toposheets Lab

Course Code: C24SEC209P **Marks for External: 15**
30 Hrs (2 Hrs/week) **Marks for Internal: 10**
Credit: 1 **Total Marks: 25**
Time: 2 Hours

A project file consisting of 10 exercises on the below mentioned themes:

1. Reduction and Enlargement of Maps. (2 Exercises)
2. Distribution maps; Choropleth Method (1 Exercise)
3. Distribution maps; Dot Method (1 Exercise)
4. Distribution maps; Isopleth Method (1 Exercise)
5. Distribution maps; Diagrammatic Methods (1 Exercise)
6. Conventional Signs and symbols on Toposheets (1 Exercise)
7. Contours line and drainage pattern on Toposheets (1 Exercise)
8. Land Uses on Toposheets (2 Exercises)

Recommended Books/E-resources/LMS:

1. Singh L. R. (2016) Fundamentals of Practical Geography, Sharda Pusta Bhawan,Allahabad.
2. Singh, L.R and Singh, R (1973) Map work and practical geography, CentralBook
3. Allahabad
4. Singh, R.L (2005) Elements of Practical Geography. Kalyani Publishers, NewDelhi. India.
5. Sharma, J.P. (2016) Prayogik Bhugol, Rastogi Publications, Meerut.
6. Sarkar, A. (2015) Practical geography: A systematic approach, Orient BlackSwan Private Ltd., New Delhi.
7. Robinson, A.H., et. al. (1995) Elements of Cartography, John Wiley, New York.
8. Dent, B.D. (1999) Cartography: Thematic Map Design, (Vol. 1), McGraw Hill.
9. Gupta, K.K. and Tyagi, V.C (1992) Working with Maps, Survey of India, DST,New Delhi.
10. Monkhouse, F.J and Wilkinson, H.R (1971) Maps and Diagrams. Methuenand Co. Ltd., London
11. Singh, G (2005) Map work and practical geography. Vikas Publishing HousePvt. Ltd.,New Delhi

Course outcomes

At the end of the course, the students would be able to:

CO1. Understand the Maps distribution and Toposheets.

CO2. Enable to understand different components of Maps and Toposheets.

Mapping of CO with PO

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	M	S	S
CO2	S	S	S	M	S	S

S= strong M= medium W= weak