

Chaudhary Bansi Lal University

Hansi Road, Prem Nagar, Bhiwani

(A State University Established under Govt. of Haryana Act No 25 of 2014)

Scheme of Examination for Under-Graduate Programmes Subject: Geography

**With Effect from the Academic Session: 2024-25
(As per NEP:2020)**



Department Of Geography

**Chaudhary Bansi Lal University, Prem Nagar -127031,
Bhiwani, Haryana, Indi**

Approved

UGBOS: 11 July 2025

Faculty Board: 02 Aug 2025

Sem 3	CC-3 MCC-4/ CC-M3	A, B, C, D	25UN -GEO-301	Geography of India (Theory)	3	3	20	50	70	3
				Geography of India (Practical)	1	2	10	20	30	3
	MCC-5	B & C	25UN -GEO- 302	History and Philosophy of Geography (Theory)	3	3	20	50	70	3
				History and Philosophy of Geography (Practical)	1	2	10	20	30	3
	MDC-3	A, B, C, D	25UN-GEO-MDC-301	Resource Geography of India (Theory)	2	2	15	35	50	3
				Resource Geography of India (Practical)	1	2	5	20	25	3
	SEC-3	A, B, C, D	25UN-GEO-SEC 301	Thematic Mapping (Theory)	2	2	15	35	50	3
				Thematic Mapping (Practical)	1	2	5	20	25	3
			25UN-GEO-SEC 302	Geographic Information System (Theory)	2	2	15	35	50	3
				Geographic Information System (Practical)	1	2	5	20	25	3
			25UN-GEO-SEC 303	Geospatial Technology for Disaster Mitigation & Management (Theory)	2	2	15	35	50	3
				Geospatial Technology for Disaster Mitigation & Management (Practical)	1	2	5	20	25	3
			25UN-GEO-SEC 304	Introduction to Python for Geographic Data Analysis (Theory)	2	2	15	35	50	3
				Introduction to Python for Geographic Data Analysis (Practical)	1	2	5	20	25	3
	VOC-3		25UN-GEO-VOC 301	GIS, Mapping and Spatial (Theory)	3	3	20	50	70	3
				GIS, Mapping and Spatial (Practical)	1	2	10	20	30	3
			25UN-GEO-VOC 302	Basic of QGIS (Theory)	3	3	20	50	70	3
				Basic of QGIS (Practical)	1	2	10	20	30	3
	VAC-3	C	25UN-GEO-VAC301	Mapping Our Neighborhood	2	2	15	35	50	3
			25UN-GEO-VAC302	Water Resource Management	2	2	15	35	50	3
			25UN-GEO-VAC303	Culture of India	2	2	15	35	50	3

CC-3/MCC-4/CC-M3			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Geography of India		
Course Code	25UN-GEO-301		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	CC/MCC/CC-M		
Level of the course (As per Annexure-I)	200-299		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. provide knowledge about the physiography of our nation. 2. understand the agriculture and irrigation system. 3. understand the basic demographic structure and literacy. 4. provide awareness about the resources and industries of our nation. 5* acquire knowledge of socio-economic and demographic data		
Credits	Theory	Practical	Total
	03	01	04
Contact Hours	3	2	5
Max. Marks:100 Internal Assessment Marks:20+10=30 End-Term Exam Marks: 50+20=70		Time:3 hours	

Part B- Contents of the Course

<u>Instructions for Paper-Setter</u>

Question 1 is compulsory comprising five sub-parts spread over the entire syllabus (two marks for each sub-part), to be answered in brief. There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Physical divisions and drainage system. 2. Climate, soils and natural vegetation.	12
II	3. Agricultural crops: major crops and cropping pattern. 4. Development of irrigation sources - canals and tubewells.	11
III	5. Population: distribution, density and growth. 6. Population composition: sex ratio, rural and urban, literacy, language and religion.	11
IV	7. Resources: Production and distribution of iron ore, coal, petroleum, hydro power, solar and thermal power 8. Industries: iron and steel, sugar, cotton textile and IT industry.	11
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 10 marks File record = 5 marks Viva-Voce = 5 marks	30

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

1. Identification and delineation of watershed of major rivers on map
2. Land use pattern of India (pie chart)
3. Occupational structure of India (pie chart)
4. Distribution and population density map of India (choropleth and dot method)
5. Age and sex structure (pyramid diagram)
6. Identification of the major industrial region of India by cartogram
7. Rainfall deviation diagram of at least 20 years
8. Cropping intensity and irrigation intensity (bivariate method)

Suggested Evaluation Methods

Internal Assessment:

➤ Theory

- Class Participation: **05 marks**
- Seminar/presentation/assignment/quiz/class test etc.: **05 marks**
- Mid-Term Exam: **10 marks**

➤ Practicum

- Class Participation: **NIL**
- Seminar/Demonstration/Viva-voce/Lab records etc.: **10 Marks**
- Mid-Term Exam: **NIL**

End-Term Examination:

50 Marks

20 Marks

Part C-Learning Resources Recommended Books/e-resources/LMS: 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. 6. Singh R. L. (1971) India: A Regional Geography, National Geographical Society of India. 8. Singh, Jagdish (2003) India - A Comprehensive & Systematic Geography, Gyanodaya Prakashan, Gorakhpur. 9. Pathak, C. R. (2003) Spatial Structure and Processes of Development in India. Regional Science Assoc., Kolkata. 10. Sharma, T.C. (2013) Economic Geography of India. Rawat Publication, Jaipur 11. Spate O. H. K. and Learmonth A. T. A. (1967) India and Pakistan: A General and Regional Geography, Methuen. 12. Tirtha, Ranjit (2002) Geography of India, Rawat Publs., Jaipur & New Delhi. 13. Tiwari, R.C. (2007) Geography of India. Prayag Pustak Bhawan, Allahabad

*Applicable for courses having practical components.

MCC-5			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	III		
Name of the Course	History and Philosophy of Geography		
Course Code	25UN-GEO-302		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	MCC		
Level of the course (As per Annexure-I)	200-299		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. develop an understanding on nature and philosophy of geography 2. have geographical knowledge regarding ancient and medieval period 3. acquaint with philosophical development in subject 4. acquire knowledge of modern geographical thinking 5* develop skills of making 3D earth on 2D surface.		
Credits	Theory	Practical	Total
	03	01	04
Contact Hours	3	2	5
Max. Marks:100 Internal Assessment Marks:20+10=30 End Term Exam Marks: 50=20=70		Time: 3 hours	

Part B- Contents of the Course

Question 1 is compulsory comprising five sub-parts spread over the entire syllabus (two marks for each sub-part). There will be eight questions, two from each unit. The candidate has

to answer four more questions selecting at least one question from each unit. All questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Space, place and location in geography. 2. Nature of geography as a scientific discipline and its relationship with other sciences.	11
II	3. Contribution of Greeks, Romans and Arabs in geographic knowledge. 4. Modern Geography: contribution of Humboldt and Ritter.	12
III	5. Emergence of geography as chorological science – landerkunde and landschaftkunde. 6. Concepts – environmental determinism and possibilism, areal differentiation.	11
IV	7. Quantitative revolution and development of geography as spatial science. 8. Approaches in contemporary geography – behavioral, welfare and radical.	11
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 10 marks File record = 5 marks Viva-Voce = 5 marks Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - 1. Interactive Mapping Exercise: Students use physical or digital maps (e.g., Google Earth, QGIS) to identify and categorize examples of space (open areas), place (localities with meaning), and location (absolute vs. relative coordinates) (02).	30

	2. Interdisciplinary Web: Create a concept web of geography with sciences and social science etc. (02) 3. Timeline and Biography Poster Presentation: Students prepare posters highlighting the geographic contributions of Greek, Roman and Arab with historical maps (02). 4. Comparative Case Study: For Environmental Determinism and Possibilism (with local examples (01) 5. Debate or Role Play: divide class into three groups—each represents one approach. Groups present their philosophy using a geographic issue (01).	
Suggested Evaluation Methods		

Internal Assessment: ➤ Theory • Class Participation: 5 • Seminar/presentation/assignment/quiz/class test etc.: 5 • Mid-Term Exam: 10 ➤ Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.:10 • Mid-Term Exam: NIL	End Term Examination: 50 20
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Part C-Learning Resources
Recommended Books/e-resources/LMS: 1. Dickinson, R. E (1969) The Makers of Modern Geography, London. 2. Dikshit, R.D (1997) Geographical Thought-A Contextual History of Ideas, Prentice Hall of India, New Delhi. 3. Hartshorne, R (1959) Perspectives on the Nature of Geography, Rand MacNelly, Chicago. 4. Harvey David (1989) Explanation in Geography, Edward Arnold, London. 5. Holt-Jonson (2011) Geography, History and Concepts: A Study's Guide, Sage Publications. 6. James P.E and Martin J Geoffrey (1972) All possible Worlds, John Wiley and Sons, New York. 7. Johnston, R.J (1983) Geography and Geographers, Edward Heinemann, London. 8. Peet, Richard (1998) Modern Geographical Thought, Oxford, Blackwell Publishers.

*Applicable for courses having practical components.

MDC-3			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Resource Geography of India		
Course Code	25UN-GEO-MDC-301		
Course Type: (CC/MCC/MDC/CCM/DSEC/VOC/ DSE/PC/AEC/VAC)	MDC		
Level of the course (As per Annexure-I)	200-299		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLOs):	After completing this course, the learner will be able to: 1. understand regional diversity of India with respect to its agriculture, water, energy and mineral resources. 2. enhance knowledge about policies and problems of resource management in India. 3. to develop ideas on different aspects of resources, and the linkages with development issues that geographers usually address. 4. introduce about policies of resource management and its relevance to sustainable development. 5* attain skills in plotting graphs, correlation and time series analysis of resource-based data.		
Credits	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
Max. Marks: 75 Internal Assessment Marks: 15+05 = 20 End Term Exam Marks: 35+20 = 55		Time: 03 Hours	

Part B- Contents of the Course

<u>Instructions for Paper- Setter</u>
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Question 1 is compulsory comprising of seven sub parts spread over entire syllabus (one mark for each sub part), to be answered in brief. There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Agriculture: Environmental, technological and institutional factors affecting Indian Agriculture.	3
	2. Distribution and production of rice, wheat, sugarcane and tea.	4
II	3. Water resources: development and means of irrigation, intensity of irrigation.	3
	4. Development and management of water resources, national water mission and policy; Jal Shakti Abhiyan.	4
III	5. Economic significance of minerals; production, distribution and trade of metallic minerals (iron ore and bauxite).	3
	6. Production, distribution and trade of non-metallic minerals (mica and limestone); problems of mining industry and conservation of minerals.	4
IV	7. Energy resources: production, distribution and trade of coal, and petroleum.	4
	8. Non-conventional energy resources (solar and wind); energy crisis and conservation.	5
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. 1. Distribution of marks for evaluation 2. Exercise = 10 marks 3. File record = 5 marks 4. Viva-Voce = 5 marks	30

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

1. Distribution of net sown area India or Haryana (1 exercises).

2. Proportion of irrigated area by choropleth method (1 exercise).
3. Trend of food grains production (rice, wheat, maize) and pulses production (gram and Tur or arhar) in India by line and poly graph (2 exercises).
4. Time series analysis of the trend of coal/crude oil/natural gas production in India since 1950-51 using 3/5/10-year moving average method (3 exercises).
5. Proportional distribution of conventional and non - conventional energy using comparative bar diagram (1 exercise).

Suggested Evaluation Methods

Internal Assessment:

➤ Theory

- Class Participation: **04 Marks**
- Seminar/presentation/assignment/quiz/class test etc.: **04 Marks**
- Mid-Term Exam: **07 Marks**

➤ Practicum

- Class Participation: **NIL**
- Seminar/Demonstration/Viva-voce/Lab records etc.: **05 Marks**
- Mid-Term Exam: **NIL**

End Term Examination:

35 Marks

20 Marks

Part C-Learning Resources

Recommended Books/e-resources/LMS:

1. Deshpande, CD (1992) India: A Regional Interpretation, ICSSR, New Delhi.
2. Husain, M (2020) Geography of India, McGraw Hill, Chennai.
3. Iyer, RR (2003) Water Perspective, Issues and Concerns, SAGE Publications, New Delhi.
4. Johnson, BLC (2001) Geographical Dictionary of India, Vision Books, New Delhi.
5. Khullar, DR (2011) India-A Comprehensive Geography, Kalyani Publishers, New Delhi.
6. Misra, R (2002) Fresh Water Environment, Anmol Publications, New Delhi.
7. Misra, RP and Sundaram, KV (1979) Rural Area Development: Perspectives and Approaches, Sterling Publications, New Delhi.
8. Pathak, CR (2003) Spatial Structure and Processes of Development in India. Regional Science Association, Kolkata.
9. Saroha, J and Singh, S (2022) Geography of India, Pearson, Noida.
10. Sharma, TC (2003) India: Economic and Commercial Geography, Vikas Publications, New Delhi.
11. Sharma, TC (2013) Economic Geography of India, Rawat Publications, Jaipur.
12. Shetty, R (2009) An Analysis of World Resources with reference to India, Sarala Raj Ria Publishers, Mysore.
13. Singh, RL (1971) India: A Regional Geography, National Geographical Society of India, Varanasi.
14. Singh, J (2003) India: A Comprehensive and Systematic Geography, Gyanodaya Prakashan, Gorakhpur.
15. Tirtha, R (2002) Geography of India, Rawat Publications, Jaipur.
16. Tiwari, RC (2007) Geography of India, Prayag Pustak Bhawan, Allahabad.

*Applicable for courses having practical component.

SEC-3			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Thematic Mapping		
Course Code	25UN-GEO-SEC 301		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC/SEC-1)	SEC		
Level of the course (As per Annexure-I	200-299		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	1. Understand the fundamental concepts of thematic mapping and its importance in spatial sciences. 2. Identify different types of thematic maps and their applications. 3. Develop skills in designing and producing thematic maps using GIS software. 4. Interpret thematic maps for spatial analysis and decision-making. 5*. Apply cartographic principles and design elements effectively in map-making.		
Credits	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
Max. Marks:70 Internal Assessment Marks: 15+05 =20 End-Term Exam Marks: 35+15 = 50		Time:3 hours	

Part B- Contents of the Course

Instructions for Paper-Setter

Question 1 is compulsory comprising seven sub-parts spread over the entire syllabus (one mark for each sub-part), to be answered in brief. There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Introduction to Thematic Mapping: Definition, History, and Applications 2. Types of Thematic Maps: Choropleth, Isopleth, Dot, Flow, and Cartograms	7
II	3. Cartographic Principles: Scale, Projections, Generalization, and Symbolization 4. Data Classification Methods: Equal Interval, Quantile, Natural Breaks, and Standard Deviation	8
III	5. Visual Variables in Thematic Mapping: Color, Size, Shape, and Texture 6. Map Layout and Design: Title, Legend, North Arrow, Scale Bar, and Annotation	7
IV	7. GIS Software for Thematic Mapping: QGIS/ArcGIS etc. 8. Accuracy, Ethics, and Interpretation of Thematic Maps	8
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 05 marks File record = 05 marks Viva-Voce = 05 marks Practical Record: A project file consisting of 8 exercises on the below mentioned themes with GIS Software: - 1. Prepare Base Map for the Thematic mapping (2 exercises). 2. Add all the elements of Maps in a Thematic Map (2 exercises). 3. Prepare One Choropleth and One Isopleth Map (2 exercises). 4. Apply Two Data Classification Methods on Thematic Maps (2 exercises).	30

Suggested Evaluation Methods	
Internal Assessment: ➤ Theory • Class Participation: 04 Marks • Seminar/presentation/assignment/quiz/class test etc.: 04 Marks • Mid-Term Exam: 07 Marks	End-Term Examination: 35 Marks
➤ Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: 05 Marks • Mid-Term Exam: NIL	15 Marks
Part C-Learning Resources	
Recommended Books/e-resources/LMS: 1. Dent, B.D., Torguson, J.S., & Hodler, T.W. (2008). <i>Cartography: Thematic Map Design</i>, McGraw-Hill, New York. 2. Slocum, T.A., McMaster, R.B., Kessler, F.C., & Howard, H.H. (2009). <i>Thematic Cartography and Geovisualization</i>, Pearson Education, Upper Saddle River. 3. Robinson, A.H., Morrison, J.L., Muehrcke, P.C., Kimerling, A.J., & Guptill, S.C. (1995). <i>Elements of Cartography</i>, Wiley, New York. 4. Tyner, J.A. (2010). <i>Principles of Map Design</i>, Guilford Press, New York. 5. Brewer, C.A. (2015). <i>Designing Better Maps: A Guide for GIS Users</i>, Esri Press, Redlands. 6. MacEachren, A.M. (2004). <i>How Maps Work: Representation, Visualization, and Design</i>, Guilford Press, New York. 7. Monmonier, M. (1996). <i>How to Lie with Maps</i>, University of Chicago Press, Chicago. 8. QGIS Documentation and Training Manual – https://docs.qgis.org 9. ArcGIS Online Resources – https://www.esri.com/training	

*Applicable for courses having practical components.

SEC-3			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Geographic Information System		
Course Code	25UN-GEO-SEC 302		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC/SEC-1)	SEC		
Level of the course (As per Annexure-I)	200-299		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	1. understand the fundamental concepts, components, and functions of Geographic Information Systems. 2. identify and describe different types and sources of spatial and non-spatial data. 3. acquire, manage, and analyse geospatial data using GIS techniques. 4. design, create, and interpret thematic maps for informed decision-making. 5*. gain proficiency in using GIS software (e.g., QGIS or ArcGIS) for data processing and visualization.		
Credits	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
Max. Marks:70 Internal Assessment Marks: 15+05 =20 End-Term Exam Marks: 35+15 = 50		Time:3 hours	

Part B- Contents of the Course

Instructions for Paper-Setter

Question 1 is compulsory comprising seven sub-parts spread over the entire syllabus (one mark for each sub-part), to be answered in brief. There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Introduction to GIS: Definition, History and Components 2. Spatial and Non-Spatial Data: Types, Sources & Data Formats	7
II	3. Spatial Data Models: Raster and Vector Data Structures, ad Advantages 4. Coordinate Systems and Map Projections: Concepts and Types	7
III	5. Data Input and Editing: Digitization, Scanning, and Geo-referencing 6. Spatial Analysis: Buffering, Overlay, and Query Techniques	8
IV	7. Cartographic Design: Map Elements, Layout, Symbolization etc. 8. Application of GIS: Environment, Urban Planning, Disaster Management etc.	8
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 05 marks File record = 05 marks Viva-Voce = 05 marks Practical Record: A project file consisting of 8 exercises on the below mentioned themes with GIS Software: - 1. Importing and Exploring Spatial and Non-Spatial Data (2 exercises). 2. Visualization of Raster and Vector Data (2 exercises). 3. Buffer and Overlay Analysis for Site Suitability (2 exercises). 4. Cartographic Design and Map Layout Creation (2 exercises).	30

Suggested Evaluation Methods	
Internal Assessment: ➤ Theory • Class Participation: 04 Marks • Seminar/presentation/assignment/quiz/class test etc.: 04 Marks • Mid-Term Exam: 07 Marks	End-Term Examination: 35 Marks
➤ Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: 05 Marks • Mid-Term Exam: NIL	15 Marks
Part C-Learning Resources	
Recommended Books/e-resources/LMS: 1. Longley, P.A., Goodchild, M.F., Maguire, D.J., & Rhind, D.W. (2015). <i>Geographic Information Systems and Science</i>. John Wiley & Sons. 2. Heywood, I., Cornelius, S., & Carver, S. (2011). <i>An Introduction to Geographical Information Systems</i>. Pearson Education. 3. Chang, K.-T. (2018). <i>Introduction to Geographic Information Systems</i>. McGraw-Hill. 4. Burrough, P.A., & McDonnell, R.A. (1998). <i>Principles of Geographical Information Systems</i>. Oxford University Press. 5. DeMers, M.N. (2008). <i>Fundamentals of Geographic Information Systems</i>. Wiley. 6. Shekhar, S., & Chawla, S. (2003). <i>Spatial Databases: A Tour</i>. Prentice Hall. 7. QGIS Documentation: https://docs.qgis.org 8. Esri GIS Tutorials and Resources: https://www.esri.com/trainin	

*Applicable for courses having practical components.

SEC-3			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Geospatial Technology for Disaster Mitigation & Management		
Course Code	25UN-GEO-SEC 303		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC/SEC-1)	SEC		
Level of the course (As per Annexure-I	200-299		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	1. understand the fundamentals of disaster types and management frameworks. 2. explain the role and application of geospatial technologies (GIS, Remote Sensing, GPS) in disaster risk reduction. 3. acquire, manage, and analyse spatial data relevant to natural and anthropogenic disasters. 4. apply geospatial tools for hazard mapping, risk analysis, early warning systems, and disaster mitigation planning. 5*. create thematic, hazard, and vulnerability maps using geospatial software and remote sensing data through hands-on lab exercises.		
Credits	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
Max. Marks:70 Internal Assessment Marks: 15+05 =20 End-Term Exam Marks: 35+15 = 50		Time:3 hours	
Part B- Contents of the Course			

Instructions for Paper-Setter

Question 1 is compulsory comprising seven sub-parts spread over the entire syllabus (one mark for each sub-part), to be answered in brief. There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Introduction to Disasters: Types and Management Frameworks 2. Role of Geospatial Technology in Disaster Management	7
II	3. Data Sources for Disaster Management: Satellite Imagery, Ground Data etc. 4. Spatial Data Models and Techniques for Hazard Mapping	7
III	5. GIS Applications in Hazard and Risk Assessment: Floods, Earthquakes, Landslides 6. Remote Sensing Applications in Disaster Monitoring and Early Warning Systems	8
IV	7. Case Studies: Tsunami, Cyclone and Urban Disasters 8. Disaster Mitigation Planning: Vulnerability Mapping and Decision Support Systems	8
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 05 marks File record = 05 marks Viva-Voce = 05 marks Practical Record: A project file consisting of 8 exercises on the below mentioned themes with GIS Software: - 1. Spatial data preparation for disaster management (2 exercises) 2. Thematic and Hazard Mapping (2 exercises) 3. Remote sensing for disaster monitoring (2 exercises). 4. Vulnerability mapping (2 exercises).	30

Suggested Evaluation Methods	
Internal Assessment: ➤ Theory - Class Participation: 04 Marks - Seminar/presentation/assignment/quiz/class test etc.: 04 Marks - Mid-Term Exam: 07 Marks	End-Term Examination: 35 Marks
➤ Practicum - Class Participation: NIL - Seminar/Demonstration/Viva-voce/Lab records etc.: 05 Marks - Mid-Term Exam: NIL	15 Marks
Part C-Learning Resources	
Recommended Books/e-resources/LMS: Bhatt, C.M. & Bhandari, L. (2012). <i>Disaster Management: A Geographic Perspective</i>. G.K. Publishers. Schneid, T.D. & Collins, L. (2001). <i>Disaster Management and Preparedness</i>. Lewis Publishers. ESRI Guide (2020). <i>GIS for Disaster Management</i>. Environmental Systems Research Institute. Alexander, D. (2000). <i>Confronting Catastrophe: New Perspectives on Natural Disasters</i>. Oxford University Press. Coppola, D.P. (2015). <i>Introduction to International Disaster Management</i>. Elsevier. Jensen, J.R. (2007). <i>Remote Sensing of the Environment: An Earth Resource Perspective</i>. Pearson. NDMA Guidelines (India): https://ndma.gov.in/ UNDRR Knowledge Base: https://www.undrr.org/publications NASA Earth Observatory: https://earthobservatory.nasa.gov/ Google Earth Engine Developer Guide: https://developers.google.com/earth-engine/	

*Applicable for courses having practical components.

SEC-3			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Introduction to Python for Geographic Data Analysis		
Course Code	25UN-GEO-SEC 304		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC/SEC-1)	SEC		
Level of the course (As per Annexure-I	200-299		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	1. understand basic programming concepts using Python. 2. read, manipulate, and analyse spatial data using Python libraries. 3. perform geospatial operations and visualization using packages such as geopandas, matplotlib, and folium. 4. automate spatial data processing tasks and generate reproducible workflows. 5*. develop a basic geospatial analysis script for mapping, querying, and data transformation through lab-based practice.		
Credits	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
Max. Marks:70 Internal Assessment Marks: 15+05 =20 End-Term Exam Marks: 35+15 = 50		Time:3 hours	
Part B- Contents of the Course			

Instructions for Paper-Setter

Question 1 is compulsory comprising seven sub-parts spread over the entire syllabus (one mark for each sub-part), to be answered in brief. There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Introduction to Python: Syntax, Data Types, Lists, 2. Introduction to Python: Dictionaries, Loops, and Functions	7
II	3. Introduction to Geographic Data and Formats (Shapefile, GeoJSON, Raster). 4. Python Environment Setup: Jupyter Notebook, Anaconda, IDEs for GIS Workflows.	7
III	5. Working with <code>pandas</code> and <code>geopandas</code> : 6. Data Frames, Geodata Frames, and I/O operations	8
IV	7. Geospatial Data Visualization using <code>matplotlib</code> , <code>seaborn</code> , and <code>folium</code> 8. Coordinate Systems, Projections, and Geometric Operations with <code>shapely</code> and <code>pyproj</code>	8
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 05 marks File record = 05 marks Viva-Voce = 05 marks Practical Record: A project file consisting of 8 exercises on the below mentioned themes with GIS Software: - 1. Python Basics for Geographic Data (2 exercises) 2. Geospatial Data Handling and Mapping (2 exercises) 3. Spatial Analysis and Operations (2 exercises) 4. Web Mapping and Automation (2 exercises)	30

Suggested Evaluation Methods	
Internal Assessment: ➤ Theory • Class Participation: 04 Marks • Seminar/presentation/assignment/quiz/class test etc.: 04 Marks • Mid-Term Exam: 07 Marks	End-Term Examination: 35 Marks
➤ Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: 05 Marks • Mid-Term Exam: NIL	15 Marks
Part C-Learning Resources	
Recommended Books/e-resources/LMS: 1. Sullivan, C. (2019). <i>Geographic Data Science with Python</i>. Packt Publishing. 2. Reis, B. & Silva, A. (2021). <i>Geospatial Analysis with Python</i>. No Starch Press. 3. Fitzgerald, K. (2022). <i>Python for Data Analysis</i> (3rd ed.). O'Reilly Media. 4. GeoPandas Documentation: https://geopandas.org/ 5. Folium Documentation: https://python-visualization.github.io/folium/ 6. PyShp, Rasterio, Shapely, and Fiona Libraries: https://pypi.org 7. Google Earth Engine Python API: https://developers.google.com/earth-engine/python 8. Python for Geospatial Analysis (Coursera/MOOC) – Available through major e-learning platforms.	

*Applicable for courses having practical components.

VOC-3			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	III		
Name of the Course	GIS, Mapping and Spatial Analysis		
Course Code	25UN-GEO-VOC 301		
Course Type: (CC/MCC/MDC/CCM/DSEC/VOC/ DSE/PC/AEC/VAC)	VOC		
Level of the course (As per Annexure-I)	200-299		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLOs):	After completing this course, the learner will be able to: 1. understand the core concepts of GIS, mapping, and spatial data types. 2. demonstrate practical knowledge of spatial data acquisition, map design, and cartographic elements. 3. apply GIS tools and techniques for spatial analysis and thematic mapping. 4. conduct basic geospatial investigations using GIS software (QGIS/ArcGIS/Open-source tools).. 5* attain skills in solving practical problems associated with mapping and spatial analysis with GIS.		
Credits	Theory	Practical	Total
	3	1	4
Contact Hours	3	2	5
Max. Marks: 100 Internal Assessment Marks: 20+10 = 30 End Term Exam Marks: 50+20 = 70		Time: 03 Hours	

Part B- Contents of the Course		
<u>Instructions for Paper- Setter</u>		
Question 1 is compulsory comprising of five sub parts spread over entire syllabus (two marks for each sub part). There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.		
Unit	Topics	Contact Hours
I	1. Introduction to GIS: Definition, Components, and Applications 2. Types of Spatial Data: Raster and Vector – Concepts, Sources, and Formats	11
II	3. Cartographic Principles: Scale, Projections, Symbols, Layout Design 4. Spatial Data Collection: GPS, Satellite Imagery, and Field Survey Techniques	11
III	5. Introduction to GIS Software: Interface, Data Input, Editing, and Management (QGIS/ArcGIS) 6. Thematic Mapping: Choropleth, Isopleth, Dot Maps, and Flow Maps	11
IV	7. Spatial Analysis Tools: Buffering, Overlay, Query, and Spatial Statistics 8. Case Studies and Applications: Urban Planning, Disaster Management, Environmental Monitoring.	12
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 10 marks File record = 5 marks Viva-Voce = 5 marks Practical Record: A project file consisting of 8 exercises on the below mentioned themes: -	30

	1. Base Map Creation and Feature Mapping (Create base maps and digitize roads, land use, and landmarks) (2 Exercises) 2. Map Design and Cartographic Elements (Add scale, legend, north arrow, and title using QGIS layout designer) (2 Exercises) 3. Thematic Mapping (Choropleth & Isopleth) (Create population density maps and rainfall distribution maps) (2 Exercises) 4. Basic Spatial Analysis using GIS Tools (Buffer analysis for service zones; Overlay analysis of land use and population layers) (2 Exercises)	
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Suggested Evaluation Methods

Internal Assessment: ➤ Theory • Class Participation: 05 Marks • Seminar/presentation/assignment/quiz/class test etc.: 05 Marks • Mid-Term Exam: 10 Marks ➤ Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: 10 Marks • Mid-Term Exam: NIL	End Term Examination: 50 Marks 20 Marks
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Part C-Learning Resources

Recommended Books/e-resources/LMS:

1. Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2015). *Geographic Information Systems and Science*, Wiley.
2. Heywood, I., Cornelius, S., & Carver, S. (2011). *An Introduction to Geographical Information Systems*, Pearson.
3. Burrough, P. A., & McDonnell, R. A. (1998). *Principles of Geographical Information Systems*, Oxford University Press.
4. Jensen, J. R. (2007). *Remote Sensing of the Environment: An Earth Resource Perspective*, Pearson.
5. QGIS Training Manual – <https://docs.qgis.org>
6. OpenStreetMap Learning Portal – <https://learnosm.org>
7. ESRI e-Learning Platform – <https://www.esri.com/training>

*Applicable for courses having practical component.

VOC-3			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Basic of QGIS		
Course Code	25UN-GEO-VOC 302		
Course Type: (CC/MCC/MDC/CCM/DSEC/VOC/ DSE/PC/AEC/VAC)	VOC		
Level of the course (As per Annexure-I)	200-299		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLOs):	After completing this course, the learner will be able to: 1. understand the core concepts of GIS and the QGIS environment. 2. perform basic spatial data handling, map creation, and data visualization using QGIS. 3. apply QGIS tools to digitize features, create thematic maps, and manage spatial data. 4. conduct simple spatial queries and geoprocessing tasks for real-world applications. 5* attain skills in solving practical problems associated with mapping and spatial analysis with QGIS.		
Credits	Theory	Practical	Total
	3	1	4
Contact Hours	3	2	5
Max. Marks: 100 Internal Assessment Marks: 20+10 = 30 End Term Exam Marks: 50+20 = 70		Time: 03 Hours	

Part B- Contents of the Course		
<u>Instructions for Paper- Setter</u>		
Question 1 is compulsory comprising of five sub parts spread over entire syllabus (two marks for each sub part). There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.		
Unit	Topics	Contact Hours
I	1. Introduction to GIS and QGIS: Overview, Interface, Features 2. Types of Spatial Data: Raster vs Vector, Coordinate Reference Systems (CRS)	11
II	3. Spatial Data: Shapefiles, GeoJSON, CSV, Raster files 4. Attribute Table, Field Calculator, and Data Queries	11
III	5. Digitization and Editing Tools: Creating Point, Line, and Polygon Layers 6. Processing of Raster Data in QGIS and Its application	11
IV	7. Symbolology and Thematic Mapping: Graduated Symbols, Categorized Maps, Layout Manager: Creating Map Layouts, Legends, and Exporting Maps 8. Case Studies and Applications: Urban Planning, Disaster Management, Environmental Monitoring.	12
V*	Instructions for external practical examiner: There will be three questions in all and candidate has to attempt two exercises. Distribution of marks for evaluation Exercise = 10 marks File record = 5 marks Viva-Voce = 5 marks Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - 1. QGIS Interface and Project Setup (Load vector/raster layers, set CRS, navigate map tools) 2. Data Import and Attribute Handling (Join CSV with spatial data, use Field Calculator for basic operations) 3. Digitization and Feature Editing (Create and edit shapefiles; draw roads, rivers, land use) 4. Georeferencing (Georeference scanned map using ground control points) 5. Thematic Mapping (Create choropleth and symbol maps using attribute data) 6. Map Layout and Export (Add north arrow, legend, scale bar, and export high-quality map)	30

	7. Buffer and Overlay Analysis (Perform buffer zones for schools or hospitals; intersect analysis) 8. Final Project (Neighborhood Mapping) & Digitize and map local features (roads, land use, services) and present map)	
Suggested Evaluation Methods		
Internal Assessment: ➤ Theory • Class Participation: 05 Marks • Seminar/presentation/assignment/quiz/class test etc.: 05 Marks • Mid-Term Exam: 10 Marks ➤ Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: 10 Marks • Mid-Term Exam: NIL		End Term Examination: 50 Marks 20 Marks
Part C-Learning Resources		
Recommended Books/e-resources/LMS: 1. QGIS Documentation and Training Manual – https://docs.qgis.org 2. Graser, A. (2016). <i>Learning QGIS</i> , Packt Publishing. 3. Sherman, G. (2014). <i>The Geospatial Desktop: Open-Source GIS & Mapping</i> , Locate Press. 4. OpenStreetMap Resources – https://learnosm.org 5. GISGeography Tutorials – https://gisgeography.com		

*Applicable for courses having practical component.

VAC-3			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Mapping Our Neighborhood		
Course Code	25UN-GEO-VAC301		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	VAC		
Level of the course (As per Annexure-I)	200-299		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. understand the basics of spatial thinking and mapping, including types of maps, direction, scale, and map symbols. 2. collect and organize geographic information through field surveys, observation, and basic GPS techniques. 3. use digital mapping tools (e.g., Google Maps, Google Earth, OpenStreetMap) to visualize and analyze neighborhood features. 4. design and present a thematic neighborhood map, demonstrating understanding of layout, data representation, and local issues. 5*. NA		
Credits	Theory	Practical	Total
	02	00	02
Contact Hours	02	-	02
Max. Marks:50 Internal Assessment Marks:15 End-Term Exam Marks: 35		Time:3 hours	

Part B- Contents of the Course		
<u>Instructions for Paper-Setter</u>		
Question 1 is compulsory comprising seven sub-parts spread over the entire syllabus (one mark for each sub-part), to be answered in brief. There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.		
Unit	Topics	Contact Hours
I	1. Introduction to Mapping and Spatial Thinking 2. Sketch Maps, Landmarks, Directions, and Types of Maps	7
II	3. Elements of a Map: Scale, Legend, Symbols, and Orientation 4. Methods of Data Collection: Field Survey, Observation, and GPS	8
III	5. Base Map Creation and Feature Mapping (Land Use, Roads, Amenities) 6. Introduction to Digital Mapping Tools: Bhuvan, Google Earth, Google Maps, OpenStreetMap.	8
IV	7. Thematic Mapping: Social, Environmental, and Civic Issues 8. Neighborhood Mapping Project: Issue Identification and Data Representation	7
V*	NA	
Suggested Evaluation Methods		
Internal Assessment: ➤ Theory • Class Participation: 04 Marks • Seminar/presentation/assignment/quiz/class test etc.: 04 Marks • Mid-Term Exam: 07 Marks ➤ Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: NIL • Mid-Term Exam: NIL		End-Term Examination: 35 Marks NIL

Part C-Learning Resources

Recommended Books/e-resources/LMS:

1. Krygier, J., & Wood, D. (2016). *Making Maps: A Visual Guide to Map Design for GIS* (3rd ed.), Guilford Press.
2. Monmonier, M. (1996). *How to Lie with Maps*, University of Chicago Press.
3. <https://bhuvan.nrsc.gov.in>
4. Google Earth User Guide – <https://earth.google.com>
5. Google My Maps Help Center – <https://support.google.com/mymaps>
6. OpenStreetMap Learn Resources – <https://learnosm.org>
7. QGIS Documentation for Beginners – <https://docs.qgis.org>
8. Participatory Mapping Toolkit, Mapping for Change – <https://mappingforchange.org.uk>

*Applicable for courses having practical components.

VAC-3			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Water Resource Management		
Course Code	25UN-GEO-VAC 302		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	VAC		
Level of the course (As per Annexure-I)	200-299		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. understand the types, distribution, and significance of water resources. 2. explain modern and traditional water resource management techniques. 3. evaluate water-related issues such as scarcity, pollution, and interlinking of rivers. 4. sustainable and participatory approaches in water conservation, drawing from Indian traditional systems and contemporary practices. 5*. NA		
Credits	Theory	Practical	Total
	02	00	02
Contact Hours	02	-	02
Max. Marks:50 Internal Assessment Marks:15 End-Term Exam Marks: 35		Time:3 hours	

Part B- Contents of the Course		
<u>Instructions for Paper-Setter</u>		
Question 1 is compulsory comprising seven sub-parts spread over the entire syllabus (one mark for each sub-part), to be answered in brief. There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.		
Unit	Topics	Contact Hours
I	1. Introduction to Water Resources: Types (Surface, Groundwater), Global and Indian Water Distribution 2. Water Cycle and Watershed Concepts	7
II	3. Traditional Water Management Systems in India: Stepwells, Baolis, Johads, Tankas, Ahar-Pyne, Zabo System 4. Sacred Waterscapes and Indigenous Water Ethics.	8
III	5. Contemporary Water Management: Dams, Irrigation, Rainwater Harvesting, Groundwater Recharging. 6. Water Quality, Pollution, and Urban Water Issues.	7
IV	7. Sustainable Water Resource Management: Community Participation and Policy. 8. Case Studies: River Rejuvenation, Jal Shakti Abhiyan, Namami Ganga etc.	8
V*	NA	
Suggested Evaluation Methods		
Internal Assessment: ➤ Theory - Class Participation: 04 Marks - Seminar/presentation/assignment/quiz/class test etc.: 04 Marks - Mid-Term Exam: 07 Marks ➤ Practicum - Class Participation: NIL - Seminar/Demonstration/Viva-voce/Lab records etc.: NIL - Mid-Term Exam: NIL		End-Term Examination: 35 Marks NIL

Part C-Learning Resources

Recommended Books/e-resources/LMS:

1. **Agarwal, A., & Narain, S. (1997).** *Dying Wisdom: Rise, Fall and Potential of India's Traditional Water Harvesting Systems*, Centre for Science and Environment, New Delhi.
2. **Michael, A. M. (2008).** *Irrigation: Theory and Practice*, Vikas Publishing House.
3. **Kumar, M.D. (2010).** *Water Management in India: Issues and Challenges*, Academic Foundation.
4. **Verma, S., & Bakshi, N. (2021).** *Traditional Water Management Systems in India*, INTACH.
5. **Ramaswamy, R.I. (Ed.). (2007).** *Indigenous Knowledge Systems and Sustainable Development*, IKS Division, IGNCA.
6. **NIH (National Institute of Hydrology)** – <http://nihroorkee.gov.in>
7. **Jal Shakti Ministry (Govt. of India)** – <https://jalshakti-dowr.gov.in>
8. **Documentaries:**
 - *India's Water Warriors* (Down To Earth / CSE etc.)
 - *The Story of India's Ancient Stepwells* (YouTube/National Geographic etc.)

*Applicable for courses having practical components.

VAC-3			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Cultural Landscape of India		
Course Code	25UN-GEO-VAC 303		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	VAC		
Level of the course (As per Annexure-I)	200-299		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. understand the core concepts and diversity of Indian culture, including unity in diversity and cultural continuity. 2. identify and appreciate major cultural elements such as epics, folk traditions, art, literature, festivals, and rituals. 3. recognize the significance of Indian aesthetic traditions in music, dance, architecture, and visual arts. 4. analyze the relevance of indigenous knowledge systems and cultural practices in promoting sustainability and national identity. 5*. NA		
Credits	Theory	Practical	Total
	02	00	02
Contact Hours	02	-	02
Max. Marks:50 Internal Assessment Marks:15 End-Term Exam Marks: 35		Time:3 hours	

Part B- Contents of the Course		
<u>Instructions for Paper-Setter</u>		
Question 1 is compulsory comprising seven sub-parts spread over the entire syllabus (one mark for each sub-part), to be answered in brief. There will be eight long questions, two from each unit. The candidate has to answer four long questions, at least one question from each unit. All questions carry equal marks.		
Unit	Topics	Contact Hours
I	1. Introduction to Indian Culture: Concept, Characteristics, Spatiality and Unity in Diversity. 2. People and Practices of India: Ethnic, Regional, and Cultural Diversity	7
II	3. Epics, Folk Traditions, and Archaeological Evidence 4. Languages, Literature, and Knowledge Traditions	8
III	5. Indian Art and Aesthetics: Music, Dance and Painting 6. Fairs, Festivals, and Rituals: Local Traditions and Cultural Continuity	7
IV	7. Cultural Symbols and National Identity: Role of Symbols, Values, and the Indian Diaspora. 8. Culture and Sustainable Living: Indigenous Practices, Traditional Knowledge Systems, and Heritage Preservation.	8
V*	NA	
Suggested Evaluation Methods		
Internal Assessment: ➤ Theory • Class Participation: 04 Marks • Seminar/presentation/assignment/quiz/class test etc.: 04 Marks • Mid-Term Exam: 07 Marks ➤ Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: NIL • Mid-Term Exam: NIL		End-Term Examination: 35 Marks NIL

Part C-Learning Resources

Recommended Books/e-resources/LMS:

1. Kapila Vatsyayan (1997). *The Cultural Heritage of India*, IGNCA.
2. S. Radhakrishnan (1927). *The Hindu View of Life*, HarperCollins India.
3. Rajeev Bhargava (Ed.) (2008). *Politics and Ethics of the Indian Constitution*, Oxford University Press.
4. Michel Danino (2010). *The Lost River: On the Trail of the Sarasvati*, Penguin India.
5. Pawan K. Verma (2007). *The Great Indian Middle Class*, Penguin.
6. NCERT e-books (Class XI & XII): Indian Heritage and Culture – <https://ncert.nic.in>
7. Bharatiya Vidya Bhavan Publications – Books on Indian traditions, festivals, and history.
8. e-Content (SWAYAM / NPTEL / IGNOU):
 - *Introduction to Indian Culture* – NPTEL
 - *Understanding Indian Culture and Heritage* – IGNOU

*Applicable for courses having practical components.