

Indira Gandhi University, Meerpur- Rewari

(A State University Established under Haryana Act No. 29 of 2013)



DEPARTMENT OF GEOGRAPHY

Scheme of Examination for Undergraduate Programmes

According to Curriculum Framework for

Undergraduate Programmes as per NEP 2020

**(Multiple Entry-Exit, Internships and
Choice Based Credit System)**

**To be implemented w.e.f. Academic Session 2024-25 in
Indira Gandhi University and its Affiliated Colleges**

Indira Gandhi University, Meerpur- Rewari

DEPARTMENT VISION AND MISSION

OUR VISION

The Department of Geography enlightens students to develop their knowledge and skills to understand real world problems and contribute to global development in a meaningful way.

OUR MISSION

Our mission is to develop multidisciplinary thinking among future geographers and inspire them to provide sustainable solutions to physical and social problems.

Annexure-1 (1-3 Pages)

INDIRA GANDHI UNIVERSITY, MEERPUR REWARI
Scheme of Examination for Undergraduate Programmes Subject: Geography
According to Curriculum Framework for Undergraduate Programmes as per NEP 2020
(Multiple Entry-Exit, Internships and Choice Based Credit System)
To be implemented w.e.f. Academic Session 2024-25 in Indira Gandhi University and its Affiliated Colleges

Sem.	Course Type	Applicable Scheme	Course Code	Nomenclature of paper	Credits	Contact hours	Internal marks	End term Marks	Total Marks	Duration of exam (Hrs.) T + P
Sem1	CC-1 MCC-1	A, B & C	24L4.5-GEO-101	Physical Geography (Theory)	3	3	20	50	70	3
				Physical Geography (Practical)	1	2	10	20	30	3
	MCC-2	C	24L4.5-GEO-102	Fundamentals of Resource Geography (Theory)	3	3	20	50	70	3
				Fundamentals of Resource Geography (Practical)	1	2	10	20	30	3
	CC-M1	A, B & D	24L4.5-GEO-103	General Geography of Haryana	2	2	15	35	50	3
	MDC-1	A, B, C & D	24L4.5-MDC-GEO-101	Physical Geography of India (Theory)	2	2	15	35	50	3
				Physical Geography of India (Practical)	1	2	5	20	25	3
Sem 2	CC-2 MCC-3	A, B & C	24L4.5-GEO-201	Human Geography (Theory)	3	3	20	50	70	3
				Human Geography (Practical)	1	2	10	20	30	3
	DSEC-1	C	24L4.5-GEO-202	Cartographic Techniques in Geography (Theory)	3	3	20	50	70	3
				Cartographic Techniques in Geography (Practical)	1	2	10	20	30	3
	CC-M2	A, B & D	24L4.5-GEO-203	General Geography of India	2	2	15	35	50	3
	MDC-2	A, B, C & D	24L4.5-MDC-GEO-201	Human Geography of India (Theory)	2	2	15	35	50	3
				Human Geography of India (Practical)	1	2	5	20	25	3
Sem3	CC-3 MCC-4	A, B & C	24L5.0-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	24L5.0-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
		A, B, C & D		Resource Geography of India (Theory)	2	2	15	35	50	3

	MDC-3		24L5.0-MDC-GEO-301	Resource Geography of India (Practical)	1	2	5	20	25	3
	SEC-3	A, B, C & D	24L5.0-SEC-GEO-301	Geographical Landscapes:Exploration beyond the classroom learning (Theory)	2	2	15	35	50	3
				Geographical Landscapes:Exploration beyond the classroom learning (Practical)	1	2	5	20	25	3
	CC-4	A, B & C	24L5.0-GEO-401	Fundamentals of Economic Geography (Theory)	3	3	20	50	70	3
	MCC-6			Fundamentals of Economic Geography (Practical)	1	2	10	20	30	3
Sem4	MCC-7	B & C	24L5.0-GEO-402	Introduction to Social Geography (Theory)	3	3	20	50	70	3
				Introduction to Social Geography (Practical)	1	2	10	20	30	3
	MCC-8	B & C	24L5.0-GEO-403	Geography of Settlements (Theory)	3	3	20	50	70	3
				Geography of Settlements (Practical)	1	2	10	20	30	3
	DSE-1	B & C	24L5.0-GEO-404	Fundamentals of Bio-Geography (Theory)	3	3	20	50	70	3
				Fundamentals of Bio- Geography (Practical)	1	2	10	20	30	3
		OR								
		B & C	24L5.0-GEO-405	Geography of Tourism (Theory)	3	3	20	50	70	3
				Geography of Tourism (Practical)	1	2	10	20	30	3
	CC-M4 (V)		24L5.0-VOC-GEO401	Introduction to Geographical Information System (GIS) (Theory)	3	3	20	50	70	3
				Introduction to Geographical Information System (GIS) (Practical)	1	2	10	20	30	3
	VAC-4		24L5.0-VAC-GEO-402	Disaster Management	2	2	15	35	50	3
Sem5	CC-5 MCC-9	A, B & C	24L5.5-GEO-501	Statistical Methods in Geography (Theory)	3	3	20	50	70	3
				Statistical Methods in Geography (Practical)	1	2	10	20	30	3
	MCC-10	B & C	24L5.5-GEO-502	Regional Development and Planning (Theory)	3	3	20	50	70	3
				Regional Development and Planning (Practical)	1	2	10	20	30	3
		B & C	24L5.5-GEO-503	Geography of Trade and Transport (Theory)	3	3	20	50	70	3
				Geography of Trade and Transport (Practical)	1	2	10	20	30	3

	DSE-2		Or								
		B & C	24L5.5-GEO-504	Cultural Geography (Theory)	3	3	20	50	70	3	
				Cultural Geography (Practical)	1	2	10	20	30	3	
	DSE-3	B & C	24L5.5-GEO-505	Geography of Disaster Management (Theory)	3	3	20	50	70	3	
				Geography of Disaster Management (Practical)	1	2	10	20	30	3	
		OR									
		B & C	24L5.5-GEO-506	Geography of Water Resources (Theory)	3	3	20	50	70	3	
Geography of Water Resources (Practical)	1			2	10	20	30	3			
Sem 6	CC-6 MCC-11	A, B & C	24L5.5-GEO-601	Fundamentals of Remote Sensing (Theory)	3	3	20	50	70	3	
				Fundamentals of Remote Sensing (Practical)	1	2	10	20	30	3	
	MCC-12	B & C	24L5.5-GEO-602	Urban Geography (Theory)	3	3	20	50	70	3	
				Urban Geography (Practical)	1	2	10	20	30	3	
	DSE-4	B & C	24L5.5-GEO-603	Political Geography Theory)	3	3	20	50	70	3	
				Political Geography (Practical)	1	2	10	20	30	3	
		OR									
	B & C	24L5.5-GEO-604	Agricultural Geography (Theory)	3	3	20	50	70	3		
			Agricultural Geography (Practical)	1	2	10	20	30	3		
		DSE-5	B & C	24L5.5-GEO-605	Elementary Soil Geography (Theory)	3	3	20	50	70	3
	Elementary Soil Geography (Practical)				1	2	10	20	30	3	
	OR										
	B & C		24L5.5-GEO-606	Introduction to Population Geography (Theory)	3	3	20	50	70	3	
		Introduction to Population Geography (Practical)		1	2	10	20	30	3		
	CC-M6 (V)	B & C	24L5.5-VOC-GEO 601	Making of Maps (Theory)	3	3	20	50	70	3	
				Making of Maps (Practical)	1	2	10	20	30	3	
Sem7	CC-H1 / CC-HM1	B & C	24L6.0-GEO-701	Geography and Climates	4	4	30	70	100	3	
	CC-H2	B & C	24L6.0-GEO-702	Landforms: Origin, Structure and Processes	4	4	30	70	100	3	
	CC-H3	B & C	24L6.0-GEO-703	Geography and World Economies	4	4	30	70	100	3	
	DSE-6	B & C	24L6.0-GEO-704	Geography of Asia	4	4	30	70	100	3	
		OR									
		B & C	24L6.0-GEO-705	Population Dynamics and Policies	4	4	30	70	100	3	

	PC-H1	B & C	24L6.0-GEO-706	Advanced Cartography	4	8	30	70	100	6
Sem8	CC-H4 / CC-HM2	B & C	24L6.0-GEO-801	Geography and Hazard Management	4	4	30	70	100	3
	CC-H5	B & C	24L6.0-GEO-802	Research Methodology in Geography	4	4	30	70	100	3
	CC-H6	B & C	24L6.0-GEO-803	Geography of Agriculture and Food Security	4	4	30	70	100	3
	DSE-7	B & C	24L6.0-GEO-804	Geography of Europe	4	4	30	70	100	3
		OR								
		B & C	24L6.0-GEO-805	Geography and Watershed Management	4	4	30	70	100	3
	PC-H2	B & C	24L6.0-GEO-806	Morphometric Analysis of Landforms	4	8	30	70	100	6
	OR									
	CC-H4/ CC-HM2	B & C	24L6.0-GEO-801	Geography and Hazard Management	4	4	30	70	100	3
	CC-H5	B & C	24L6.0-GEO-802	Research Methodology in Geography	4	4	30	70	100	3
	Project/Dissertation	B & C	24L6.0-GEO-807	Project/Dissertation	12	-	-	-	-	-

CC- Core Course
MDC- Multidisciplinary Course
VOC- Vocational Course
AEC- Ability Enhancement Course

MCC- Major Core Course
CC-M (V)- Minor Course Vocational
DSE- Discipline Specific Elective
VAC- Value Added Course

CC-M- Minor Core Course
DSEC- Discipline Skill Enhancement Course
PC- Practicum


Chairperson,
Department of Geography,
Indira Gandhi University,
Meerpur-Rewari (Hr.)

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Syllabus for Under Graduate Programmes as per NEP- 2020
(Multiple Entry – Exit, Internships and Choice Based Credit System)
w.e.f. 2024-25

CC-I/MCC-I			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	I		
Name of the Course	Physical Geography		
Course Code	24L4.5-GEO-101		
Course Type: (CC/MCC/MDC/CCM/DSEC/VOC/ DSE/PC/AEC/VAC)	CC/MCC		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLOs):	After completing this course, the learner will be able to: 1. acquire the knowledge about basic concepts of geotectonics. 2. understand about the agents and processes of change on the surface of earth. 3. enrich knowledge about atmosphere and its climate. 4. attain knowledge about ocean surface configuration and circulation in oceanic water. 5* attain skills in solving practical problems associated with physical geography.		
Credits	Theory	Practical	Total
	3	1	4
Contact Hours	3	3	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. Interior of the earth, geological time scale, rocks and their types. 2. Theory of isostasy, continental drift and plate tectonic; earthquakes and volcanoes.	11
II	3. Degradational processes: weathering, mass wasting and resultant landforms. 4. Landforms generated by following geomorphic agents: river, under-ground water, wind and glacier.	11
III	5. Weather and climate: Atmosphere-composition and structure. 6. Atmospheric temperature, pressure and moisture: measurement and distribution.	11
IV	7. Surface configuration of ocean floors: surface relief of the Pacific, Atlantic and Indian Ocean. 8. Circulation of oceanic waters: current of the Pacific, Atlantic and Indian Ocean.	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	30
	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - 1. Identification and collection of rock samples: granite, basalt, laterite, limestone, shale, sandstone, conglomerate, slate, phyllite, schist, gneiss, quartzite (1 exercise). 2. Extraction of physiographic information from Survey of India 1:50000 topographical maps of mountain, plateau	

	and plain regions (2 exercises). 3. Measurement of weather elements using analogue instruments: temperature (maximum, minimum and mean) relative humidity, rainfall and preparation of climograph, hythergraph and hyetograph (3 exercises). 4. Interpretation of a daily weather map of India: Pre-Monsoon, Monsoon and Post-Monsoon (2 exercises).	
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. Barry, RG and Chorley, RJ (1998) Atmosphere, Weather and Climate, Routledge, London. 2. Bunnett, RB (1987) Physical Geography in Diagrams, Pearson Education, New Delhi. 3. Critchfield, H (2002) General Climatology, Prentice-Hall of India, New Delhi. 4. Kale, V and Gupta, A (2001) Element of Geomorphology, Oxford University Press, Calcutta. 5. Khullar, DR (2014) Physical Geography, Kalyani Publishers, New Delhi. 6. Monkhouse, FJ (1960) Principles of Physical Geography. Hodder and Stoughton, London. 7. Singh, S (1998) Geomorphology, Prayag Publication, Allahabad. 8. Singh, S (2012) Physical Geography, Prayag Publication, Allahabad. 9. Thornbury, WD (1969) Principles of Geomorphology, John Wiley and Sons, New York. 10. Trewartha, GT (1981) An Introduction to Climate, Mc-Graw Hill, New York.		

*Applicable for courses having practical component.

MCC-2			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	I		
Name of the Course	Fundamentals of Resource Geography		
Course Code	24L4.5-GEO-102		
Course Type: (CC/MCC/MDC/CCM/DSEC/VOC/ DSE/PC/AEC/VAC)	MCC		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLOs):	After completing this course, the learner will be able to: 1. acquaint with nature, techniques and field of resource geography. 2. enhance knowledge about classification and development process of natural resources. 3. provide knowledge on location, conservation and management methods of resources for sustainable development. 4. provide knowledge about concepts, policies, problems and models of natural resource utilization. 5* attain skills in mapping and monitoring of land, water, forest and mineral resources.		
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			
Instructions for Paper- Setter			

Question 1 is compulsory comprising of five sub parts spread over entire syllabus (two marks for each sub part), to be answered in 15-20 words. 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. Nature, scope, techniques and importance of resource geography. 2. Concepts of resource: exploitation, accumulation, poverty and resource degradation.	11
II	3. Classification of resources: renewable and non-renewable, biotic and abiotic resources. 4. Relationship between natural resources and development process. Role of technology in natural resource development.	11
III	5. Distribution, utilization, problems and management of land and water resources. 6. Distribution, utilization, problems and management of forest and mineral resources.	12
IV	7. Models of natural resources process: Zimmermann's primitive and Kirk's decision models. 8. Sustainable resource development; Policies and challenges of natural resource management.	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. Preparation of land use/land cover map of an area from topographical sheets and aerial photographs (2 exercises). 2. Mapping of forest cover of an area from topographical sheets and aerial photographs (2 exercises). 3. Mapping of water bodies of an area from topographical sheets and aerial photographs (2 exercises). 4. Decadal changes in country-wise production of coal and iron ore with comparative decadal changes (2 exercises).	30

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: - Barbier, EB (2005) Natural Resources and Economic Development, Cambridge University Press, Cambridge. - Bhatta, B (2011) Remote Sensing and GIS, Oxford University Press, New Delhi. - Borton, I and Kates, RW (1984) Readings in Resource Management and Conservation, University of Chicago Press, Chicago. - Bruce, M (1989) Geography and Resource Analysis, John Wiley and Son, New York. - Chiras, DD and Reganold, JP (2009) Natural Resource Conservation: Management for a Sustainable Future, Pearson, New Delhi. - Cutter SN, Renwich HL and Renwick W (1991) Exploitation, Conservation, Preservation: A Geographical Perspective on Natural Resources Use, John Wiley and Sons, New York. - 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. - Gautam, A (2013) Geography of Resources: Exploitation, Conservation and Management. Sharda Pustak Bhawan, Allahabad. - Guha, JL and PR Chattroj (1994) Economic Geography-A Study of Resources, The World Press, Calcutta. - Holechek JLC, Richard A, Fisher JT and Valdez R (2003) Natural Resources: Ecology, Economics and Policy, Prentice Hall, New Jersey. - Jones G and Hollier G (1997) Resources, Society and Environmental Management, Paul Chapman, London. - Klee G (1991) Conservation of Natural Resources, Prentice Hall, Englewood. - Lillesand, TM, Kiefer, RW and Chipman, JW (2015) Remote Sensing and Image Interpretation, John Wiley and Sons, New York. - Martino, RL (1969) Resource Management. Mc Graw Hill Book Company, London. - Mather AS and Chapman K (1995) Environmental Resources, John Wiley and Sons, New York. - Mitchell B (1997) Resource and Environmental Management, Longman Harlow, England.	

*Applicable for courses having practical component.

CC-M1			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	I		
Name of the Course	General Geography of Haryana		
Course Code	24L4.5-GEO-103		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	CC-M		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. acquaint with physiography and climate of state. 2. understand the agriculture and industrial status of the state. 3. familiarize with population distribution and literacy of the state. 4. gain knowledge of trade and transport of Haryana. 5*. NA		
Credits	Theory	Practical	Total
	02	00	02
Contact Hours	2	-	2
Max. Marks:50 Internal Assessment Marks:15 End-Term Exam Marks: 35		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 10-15 words. 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. Physiography, relief and climate of Haryana. 2. Drainage, soils and natural vegetation.	7
II	3. Agriculture: cropping pattern and challenges. 4. Major industries and industrial centres of Haryana.	8
III	5. Population: distribution, density and growth. 6. Population composition: structure and literacy.	8
IV	7. Pattern of trade and transport. 8. Cultural regions of Haryana.	7
V*	NA	
Suggested Evaluation Methods		
Internal Assessment: ➤ Theory • Class Participation: 05 Marks • Seminar/presentation/assignment/quiz/class test etc.: 05 Marks • Mid-Term Exam: 05 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		
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 Centre. 4. FICCI (2007) State of Infrastructure in Haryana. 5. Singh, Jasbir (1976) Agricultural Geography of Haryana, Vishal Publishers, Kurukshetra. 6. Singh, R.L. (1971) India-A Regional Geography, National Geographical Society, Varanasi 7. Spate OHK and ATA Learmonth (1971) India and Pakistan, Methuen, London. 8. Tirtha R and Gopal Krishna (1996) Emerging India, Rawat Publications, Jaipur. 9. Regional division of Haryana, census of India, Chandigarh		

*Applicable for courses having practical components.

MDC-1			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	I		
Name of the Course	Physical Geography of India		
Course Code	24L4.5-MDC-GEO-101		
Course Type: (CC/MCC/MDC/CCM/DSEC/VOC/DSE/PC/A EC/VAC)	MDC		
Pre-requisite for the course (ifany)	N.A.		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. understand the geological and physiographic structureof India. 2. enrich skills about drainage system and varioushydrological regimes. 3. understand the climate and its characteristics. 4. acquire knowledge about different types of flora andsoils found in India.		
	5* attain skills in solving various practical problemassociated with physical aspects of India.		
Credits	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
Max. Marks: 75 Internal Assessment Marks: 15+5 =20 End-Term Exam Marks: 35+20 = 55		Time:3 hours	
Part B- Contents of the Course			

Instructions for Paper-Setter

Question 1 is compulsory comprising of seven sub parts spread over entire syllabus (one mark for each sub part), to be answered in 10-15 words. 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. Geological history and regions of India. 2. Physiographic structure and divisions.	7
II	3. Drainage system and its evolution. 4. Hydrological regimes of Indian rivers.	7
III	5. Climate: distribution of temperature, pressure and rainfall; classification and affecting factors. 6. Monsoon: circulation, mechanism and theories.	8
IV	7. Natural vegetation: classification, distribution and inter-relationships 8. Soils: classification, distribution and inter-relationships.	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 = 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. Hydrological regimes of peninsular and Himalayan rivers (2 exercises). 2. Annual trend of temperature for more than three decades (maximum, minimum and mean) (2 exercises). 3. Comparative analysis of seasonal variability of rainfall from different climatic reasons of India (2 exercises). 4. Preparation of an inventory of flora and fauna in India (1 exercise). 5. Preparation of an inventory of major geological disasters in past one decade in India (1 exercise).	30
Suggested Evaluation Methods		

Internal Assessment: ➤ Theory • Class Participation: 05 Marks • Seminar/presentation/assignment/quiz/class test etc.: 05 Marks • Mid-Term Exam: 05 Marks	End-Term Examination: 35 Marks
➤ Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: 5 Marks • Mid-Term Exam: NIL	20 Marks
Part C-Learning Resources	
Recommended Books/e-resources/LMS: 1. Deshpande, C.D. (1992) India-A Regional Interpretation, Northern Book Depot, New Delhi. 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.	

*Applicable for courses having practical components.

CC-2/MCC-3			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	II		
Name of the Course	Human Geography		
Course Code	24L4.5-GEO201		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	CC/MCC		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. gain knowledge about the fundamentals of human geography. 2. enhance the knowledge of race and religion. 3. understand the organization of space. 4. familiarize with world economic systems. 5* gain knowledge of mapping socio – economic and demographic data.		
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			
Instructions for Paper- Setter			

Question 1 is compulsory consisting of five sub parts spread over entire syllabus (two marks for each sub parts), to be answered in 15-20 words. 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. Definition, nature and scope of human geography. 2. Development of human geography approaches to study human geography, branches and relation with other social sciences.	11
II	3. Human race: Meaning, classification of races and their global diffusion and distribution. 4. Religion: Meaning, nature and classification. Evolution and global distribution of major religions in the world.	11
III	5. Organization of space: central place theory, agricultural location model and industrial location model. 6. Distribution, density and growth of population: Determinants and world pattern.	11
IV	7. World pattern of development: economy and polity 8. World pattern of migration: streams and determinants	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. Composition of major religions of the world (1 exercise). 2. Methods of representing population distribution and density (2 exercises). 3. Flow diagram of migration streams of world population (1 exercise). 4. Plotting of isotims and isodapane (2 exercises). 5. Spatial and temporal growth of world population (2 exercises).	30

DSEC-1			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	II		
Name of the Course	Cartographic Techniques in Geography		
Course Code	24L4.5-GEO-202		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	DSEC		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	After the completion of course, the students will have ability to: 1. understand and differentiate types of map scales. 2. become aware about the applications of map scales. 3. gains the basic understanding of map making and will be able to prepare different kinds of thematic maps. 4. apprehend the knowledge about surveying and survey tools. _____ 5* acquire skills to make use of scales and making thematic maps and diagrams		
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:3 hours	

Part B- Contents of the Course

Instructions for Paper-Setter

Question 1 is compulsory comprising five sub-parts spread over the entire syllabus (two marks for each sub-part), to be answered in 15-20 words. 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. Nature and scope of cartography, historical and recent development. 2. Drawing instruments: properties and characteristics; drawing techniques.	11
II	3. Scale: types, significance and applications. 4. Maps: classification, characteristics, significance and limitations.	11
III	5. Basic concepts of surveying and survey equipment's, coordinate system and map: magnetic and true north, polar and rectangular. 6. Techniques of map enlargement and reduction; map producing agencies in India (GSI, SOI, FSI, NATMO, NBBSLUP, NRSC, AISSLUP and IMD).	11
IV	7. Methods and representation of climatic data. 8. Methods and representation of socio-economic data.	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. Graphical representation of scales (2 exercises) 2. Construction of thematic maps (3 exercises) 3. Representation of data by one, two and three-dimensional diagrams (3 exercises)	30

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. Dent, B.D. (1999) Cartography: Thematic Map Design, (Vol. 1), McGraw Hill. 2. Gupta, K.K. and Tyagi, V.C (1992) Working with Maps, Survey of India, DST, New Delhi. 3. Monkhouse, F.J and Wilkinson, H.R (1971) Maps and Diagrams. Methuen and Co. Ltd., London 4. Ramamurthy, K (1982) Map Interpretation, Rex Printers, Madras. 5. Robinson A (1953) Elements of Cartography, John Wiley. 6. Siddhartha, K (2006) Geography through maps, Kisalaya Publications Pvt. Ltd, Delhi 7. Singh, G (2005) Map work and practical geography. Vikas Publishing House Pvt. Ltd., New Delhi 8. Singh, L.R and Singh, R (1973) Map work and practical geography, Central Book Allahabad 9. Singh, R.L (2005) Elements of Practical Geography. Kalyani Publishers, New Delhi. India.	

*Applicable for courses having practical components.

CC-M2			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	II		
Name of the Course	General Geography of India		
Course Code	24L4.5-GEO-203		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	CC-M		
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 location, geographical expansion, and physiography. 2. have acquaintance with the drainage and climate. 3. enrich knowledge about peopling of the nation. 4. internalize the concept of unity in diversity of our nation. 5* NA		
Credits	Theory	Practical	Total
	02	00	02
Contact Hours	2	-	2
Max. Marks:50 Internal Assessment Marks:15 End-Term Exam Marks: 35		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 10-15 words. 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. India: Locational setting and geographical expansion. 2. Physiographic divisions of India.	8
II	3. Drainage system and climate. 4. Soil and natural vegetation.	8
III	5. The Peopling of India. 6. Population distribution, density and growth.	7
IV	7. Population composition: ethnic and socio-cultural attributes (castes and tribes). 8. Unity in diversity in India.	7
V*	NA	
Suggested Evaluation Methods		
Internal Assessment: ➤ Theory - Class Participation: 05 marks - Seminar/presentation/assignment/quiz/class test etc.: 05 marks - Mid-Term Exam: 05 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: - Bose, A. et. al. eds (2001) Population in India's Development, 1947-2000, Vikas, New Delhi. - Deshpande C. D. (1992) India: A Regional Interpretation, ICSSR, New Delhi. - Johnson, B. L. C., ed. (2001) Geographical Dictionary of India. Vision Books, New Delhi. - Mandal R. B. (ed.) (1990) Patterns of Regional Geography – An International Perspective. Vol. 3 – Indian Perspective. - Sdyasuk Galina and P Sengupta (1967) Economic Regionalisation of India, Census of India - Sharma, T. C. (2003) India - Economic and Commercial Geography. Vikas Publ., New Delhi. - Singh R. L. (1971) India: A Regional Geography, National Geographical Society of India. - Singh, Jagdish (2003) India - A Comprehensive & Systematic Geography, Gyanodaya Prakashan, Gorakhpur. - Spate O. H. K. and Learmonth A. T. A. (1967) India and Pakistan: A General and Regional Geography, Methuen - Pathak, C. R. (2003) Spatial Structure and Processes of Development in India. Regional Science Assoc., Kolkata. - Tirtha, Ranjit (2002) Geography of India, Rawat Pubs., Jaipur & New Delhi.		

*Applicable for courses having practical components.

MDC-2			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	II		
Name of the Course	Human Geography of India		
Course Code	24L4.5-MDC-GEO-201		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	MDC		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. gain knowledge about population characteristics of India. 2. have understanding about distribution of tribes in India 3. acquaint with distribution of religion in India 4. gain insight into intricacies of caste structure of India 5* understand the mapping of racial and cultural characteristics of Indian population		
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			
Instructions for Paper- Setter			

Question 1 is compulsory comprising of seven sub parts spread over entire syllabus (one mark for each sub part), to be answered in 10-15 words. 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. Population distribution, density and growth. 2. Population composition, sex ratio and literacy.	11
II	3. Pattern and growth of urbanization. 4. Working population: composition and distribution.	11
III	5. Distribution of scheduled tribe population in India 6. Religion: distribution of major religions in India.	11
IV	7. Linguistic and cultural diversity in India. 8. Unity and diversity in India.	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. Age and sex pyramid of Indian population (1 exercise). 2. State wise distribution and composition of working population in India (1 exercises). 3. Map the scheduled tribe population distribution in India (1 exercises). 4. Concentration of urban population by location quotient (1 exercise). 5. Distribution of scheduled caste population (1 exercises). 6. Composition of the major religions in India (1 exercises). 7. Distribution of literacy –rural - urban and male-female (2 exercises).	30

Suggested Evaluation Methods	
Internal Assessment: > Theory • Class Participation: 5 Marks • Seminar/presentation/assignment/quiz/class test etc.: 5 Marks • Mid-Term Exam: 5 Marks > Practicum: • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: 5 Marks • Mid-Term Exam: NIL	End Term Examination: 35 Marks 20 Marks
Part C-Learning Resources	
Recommended Books/e-resources/LMS: 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, New York. 8. Fellman, J.L. (1997) Human Geography-Landscapes of Human Activities, Brown and Benchman Pub., USA. 9. Hassan, I. () Population Geography: A Systematic Exposition, Routledge, London. 10. Hussain, M. () Geography of India, 11. Hussain, M. (2018) Human Geography, Rawat, Publication, Jaipur. 12. Khullar, D. R. () India A comprehensive Geography, Kalayani Publisher. 13. McBride, P.J. (1996) Human Geography; Systems Patterns and Change, Nelson, UK and Canada. 14. Michael, C. (1996) New Patterns: Process and Change in Human Geography, Nelson, U.k.. 15. Qazi, S.A. (2010) Population Geography, APH publishers. 16. Ramachandra, R. (1992) Urbanization and Urban System in India, Oxford, London. 17. Sharma, Y.K. (2017) Human Geography, Narain publishers. 18. Singh, N. (2015) A Text Book of Human Geography, Rajesh Publishing.	

*Applicable for courses having practical component.

CC-3/MCC-4			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	III		
Name of the Course	Geography of India		
Course Code	24L5.0-GEO-301		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	CC/MCC		
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			

Instructions for Paper-Setter

Question 1 is compulsory comprising five sub-parts spread over the entire syllabus (two marks for each sub-part), to be answered in 15-20 words. 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, green revolution and its impacts. 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, work force, 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 and cotton textile; transport and communication	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. Identification and delineation of watershed of major rivers on map 2. Landuse 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)	30

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	24L5.0-GEO-302		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	MCC		
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. Classification of empirical knowledge and place of geography in the realm of knowledge. 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 – Land erkunde and land schaftkunde. 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 – behavioural, 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. Cylindrical: Equal area and Mercator (2 exercises). 2. Conical: one and two standards parallel, Bonne's and Polyconic (4 exercises). 3. Zenithal: equal area and gnomonic projections (2 exercises).	30
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
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	24L5.0-MDC-GEO-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			
Instructions for Paper- Setter			

Question 1 is compulsory comprising of seven sub parts spread over entire syllabus (one mark for each sub part), to be answered in 10-15 words. 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 and dry land 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.	30
	1. Distribution of marks for evaluation 2. Exercise = 10 marks 3. File record = 5 marks 4. Viva-Voce = 5 marks 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 pulshes 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 (1exercise).	
Suggested Evaluation Methods		
Internal Assessment: > Theory • Class Participation: 05 Marks • Seminar/presentation/assignment/quiz/class test etc.: 05 Marks • Mid-Term Exam:05 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. 5. Johnson, BLC (2001) Geographical Dictionary of India, Vision Books, New Delhi. 6. Khullar, DR (2011) India-A Comprehensive Geography, Kalyani Publishers, New Delhi. 7. Misra, R (2002) Fresh Water Environment, Anmol Publications, New Delhi. 8. Misra, RP and Sundaram, KV (1979) Rural Area Development: Perspectives and Approaches, Sterling Publications, New Delhi. 9. Pathak, CR (2003) Spatial Structure and Processes of Development in India. Regional Science Association, Kolkata. 10. Saroha, J and Singh, S (2022) Geography of India, Pearson, Noida. 11. Sharma, TC (2003) India: Economic and Commercial Geography, Vikas Publications, New Delhi. 12. Sharma, TC (2013) Economic Geography of India, Rawat Publications, Jaipur. 13. Shetty, R (2009) An Analysis of World Resources with reference to India, Sarala Raj Ria Publishers, Mysore. 14. Singh, RL (1971) India: A Regional Geography, National Geographical Society of		

India, Varanasi.

15. Singh, J (2003) India: A Comprehensive and Systematic Geography, Gyanodaya Prakashan, Gorakhpur.

16. Tirtha, R (2002) Geography of India, Rawat Publications, Jaipur.

17. 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	Geographical Landscapes: Exploration beyond the classroom learning		
Course Code	24L5.0-SEC-GEO-301		
Course Type: (CC/MCC/MDC/CCM/DSEC/VOC/ DSE/PC/AEC/VAC)	SEC		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLOs):	After completing this course, the learner will be able to: 5. understand the nature of physical and cultural landscapes 6. internalize the processes shaping natural and cultural landscapes 7. understand the transformation process of urban and rural landscapes. 8. foster an appreciation for the environment and the role of human interactions in shaping landscapes. 5* enhance students' observational, analytical, and critical thinking about their surrounding environment		
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			

Instructions for Paper- Setter

Question 1 is compulsory comprising of seven sub parts spread over entire syllabus (one mark for each sub part), to be answered in 10-15 words. 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. Landscapes: concept, definition and classification.	3
	2. Major land surface features and divisions: continents and oceans and their characteristics.	4
II	3. Natural landscapes characteristics, types and significance.	3
	4. Processes involved in shaping natural landscapes – plate tectonics, weathering and erosional agents.	4
III	5. Cultural landscapes and their formation processes.	3
	6. Factors shaping cultural landscapes – physical, historical, social and political.	4
IV	7. Urban landscapes – changing characteristics and factors shaping modern cities.	4
	8. Rural landscapes – characteristics and agents of transformation.	5
V*	Instructions for external practical examiner: This is field based study and all the students have to prepare a project report individually. The external examiner shall be conducting viva-voce on the project report.	30
	Distribution of marks for evaluation; 1. Field based project report = 10 marks 2. Viva-Voce = 10 marks	
	Practical Record: Project report of a landscape by individual students based on field survey focusing on 1. Type and characteristics of the landscape 2. Identification of factors transforming landscape	
Suggested Evaluation Methods		

Internal Assessment: ➤ Theory • Class Participation: 05 Marks • Seminar/presentation/assignment/quiz/class test etc.: 05 Marks • Mid-Term Exam: 05 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. Alanen, A.R. and Melnick, R.Z. (2000) Preserving cultural landscape in America. 2. Hayden, D (1995) The power of place: Urban landscape as public history, The MIT press. 3. Hess, D. (2013) Physical Geography: A landscape appreciation, Pearson. 4. Hoss, T.A. (2016) Appreciating physical landscape: Three hundred years of geo-tourism. 5. Johnson, L.M. and Hunn, E.S. (2010) Landscape ethno ecology (concepts of biotic and physical space). 6. Terry, AG. (1989) The Physical landscape, McGraw-Hill, USA. 7. Sinha, A. (2020) Cultural landscape of India: Imagined, enacted and Reclaimed, University of Pittsburg press, USA.	

*Applicable for courses having practical component.

CC-4/MCC-6			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	IV		
Name of the Course	Fundamentals of Economic Geography		
Course Code	24L5.0-GEO-401		
Course Type: (CC/MCC/MDC/CCM/DSEC/VOC/ DSE/PC/AEC/VAC)	CC/MCC		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLOs):	After completing this course, the learner will be able to: 5. provides knowledge about the fundamental concepts of economic geography. 6. acquisition of knowledge about resources and their conservation. 7. enrichment of knowledge about distribution of crops, minerals and energy resources 8. acquaintance with global industries, transport, communication and trade 5* attain skills in solving practical problems associated with economic geography.		
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			
Instructions for Paper- Setter			
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. Nature and scope of economic geography and its relationship with economics. 2. Classification of economic activities and their impact on environment.	11
II	3. Natural resources: types, bases of classification. 4. Utilization and conservation of natural resources.	11
III	5. World distribution of food crops (rice and wheat), commercial crops (cotton and sugarcane) and plantation crops (tea and coffee). 6. World distribution and production of coal, petroleum and natural gas, iron ore and bauxite.	11
IV	7. World distribution and production of iron and steel industry, textile industry, sugar industry and automobile industry. 8. International trade and transport and major oceanic trade routes.	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. Choropleth mapping of state-wise variation in GDP and PCI (2 exercises). 2. Computation of rail and road transport network accessibility index (2 exercises). 3. Time series analysis of world food, commercial and plantation crops production and trade using polygraph method (2 exercises). 4. Representation of coal and sugar production of major countries of the world using compound bar diagram (1	30

	exercise). 5. Representation of decadal production of major petroleum and iron and steel producing countries using multiple bar diagram (1 exercise).	
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. Gautam, A. 2010. Advanced Economic Geography. Sharda Pustak Bhawan, Allahabad. 2. Hartshorne, T. A. and Alexander, J. W. 2001. Economic Geography. Prentice Hall of India. New Delhi. 3. Hudson, R. 2005. Economic Geography. Sage Publication, New Delhi. 4. Jones, C. F. and Drakenwarld, G. G. Economic Geography. The Macmillan and Company. New York. 5. Knowled, R. and Wareing, J. 1992. Economic and Social Geography. Rupa and Company, Calcutta. 6. Knox, P. 2003. The Geography of World Economy. Arnold, London. 7. Saxena, H.M. 2013. Economic Geography. Rawat Publications, Jaipur. 8. Thomas, RS. 1962. The Geography of Economic Activities. McGraw Hill, New York. 9. Wheeler, J.O. and Muller, P.O. 1995. Economic Geography. John Wiley and Sons. New York.		

*Applicable for courses having practical component.

MCC-7			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	IV		
Name of the Course	Introduction to Social Geography		
Course Code	24L5.0-GEO-402		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	MCC		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. acquaint with social structure in spatial context. 2. gain knowledge about ethnic and social groups in India. 3. understand the social structure and religious diversity of India. 4. be well versed with concept of well-being and its indicators. 5* develop the skill to process social 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			
Question 1 is compulsory and comprise 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 questions from these by selecting at least one question from each unit. All questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Definition, nature and scope of social geography. 2. Development of social geography and approaches to study.	12
II	3. Social Structure and Processes: Tribes, and their spatial distribution. 4. Caste: origin, form and its distribution.	11
III	5. Language and dialects: origin and linguistic diversity. 6. Religion: major religion and religious plurality in India.	11
IV	7. Social problems: geography of poverty and human development index. 8. Gender inequality and gender development index	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. Computation and mapping of human development index (1 exercise) 2. Computation and mapping of gender development index (1 exercise). 3. Concentration of S.C. population: Location Quotient & dissimilarity index (2 exercises). 4. Graphical representation of income inequality: Lorenz curve (2 exercises). 5. Construction of composite index by ranking and standardization method (2 exercises).	30

Suggested Evaluation Methods	
Internal Assessment: > Theory • Class Participation: 05 Marks • Seminar/presentation/assignment/quiz/class test etc. 05Marks • Mid-Term Exam: 10 Marks > Practicum • Class Participation: NIL • Seminar/Demonstration/Viva-voce/Lab records etc.: 10Marks • Mid-Term Exam: NIL	End Term Examination: 50 20
Part C-Learning Resources	
Recommended Books/e-resources/LMS: 1. Ahmad, A. (1993) Social Structure and Regional Development, Rawat Publications, Jaipur 2. Ahmad, A. (1999) Social Geography, Rawat Publications, Jaipur 3. Ahmad, A. (2012) Social Geography of India, Concept Publishing Company, New Delhi 4. Knox, P. L. (1975) Social Wellbeing- A Spatial Perspective, Oxford University Press, London 5. Pain, R., Barke, M., Fuller, D., Gough, J., MacFarlane, R. and Mowl, G. (2001) Introducing Social Geographies, Arnold and Oxford University Press, New York 6. Panelli, R. (2004) Social Geographies: From Difference to Action, Sage Publications, London 7. Sopher, D. (1980) An Exploration of India: Geographical Perspectives on Society and Culture, Cornell Press, New York 8. Smith, D.M. (1977) Human Geography: A Welfare Approach, Arnold Heinemann. 9. Smith, D.M. (1973) The Geography of Social Well-being in the United States. McGraw Hill, New York. 10. Smith, D.M. (1977) Where the Grass is Greener: Geographical Perspectives on Inequality, Penguin.	

*Applicable for courses having practical component.

MCC-8			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	IV		
Name of the Course	Geography of Settlements		
Course Code	24L5.0-GEO-403		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	MCC		
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 fundamentals of settlements geography. 2. enrich knowledge about the distribution of rural and urban settlements. 3. familiarized with the types and patterns of rural and urban settlements. 4. acquaint with the issues and policies regarding settlement. 5* develop skill of mapping 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: 70		Time:3 hours	

Part B- Contents of the Course

Instructions for Paper-Setter

Question 1 is compulsory comprising five sub-parts spread over the entire syllabus (two marks for each sub-part), to be answered in 15-20 words. 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	- Definition, nature, scope, significance and approaches to study settlement geography. - Theories of evolution and development of settlements.	12
II	- Geographical factors affecting the growth of settlements distribution, importance of settlement studies in geography - Types of settlement: rural and urban rural-urban dichotomy and continuum.	11
III	- Rural settlement: shape, site, types and pattern. - Urban settlement: Characteristics of ancient and medieval cities.	11
IV	- Hierarchy of urban settlement: rank-size rule and primate city. - Issues and policies in settlements.	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: - - Location and distribution of urban and rural settlements using toposheets (1 exercises). - Graphical representation of rank size rule (1 exercise). - Identification of settlement pattern (2 exercises). - Traffic flow diagram (1 exercise). - Diagrammatic distribution of different class towns (1 exercise).	30

	6. Composition of urban & rural population (1 exercise). 7. Distribution of types of houses by bar diagram (1 exercise).	
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: - Desphpande, C. D. (2005) "Cities: A Geographical Study", Translated by V. G. Amrita, Manan Prakashan, Mumbai - Gharpure, V. (2013) "Nagari Bhugol", (Marathi) Pimpalpure and Company Publishers, Nagpur - Gharpure, V. (2013) "Vasti Bhugol", (Marathi) Pimpalpure and Company Publishers, Nagpur - Gharpure, V. (2017) "Manavi Bhugol", (Marathi) Pimpalpure and Company Publishers, Nagpur - Ghosh. S. (2015) "Introduction to Settlement Geography", Orient Blackswan Private Limited, Hyderabad - Jyptirmoy Sen (2007) A Text Book of Social and Cultural Geography," Kalyani Publishers, New Delhi. - Knowles, R, and Wareing, J. (1996) "Economic and Social Geography", the Made Simple Series, Rupa & Co., Calcutta - Leong, Goh-Cheng and Morgan, G. (1994) "Human and Economic Geography", Oxford University Press, Oxford - Misra, R. P. & Misra, K. eds. (1998) Million Cities of India, Sustainable Development Foundation, New Delhi. - Siddhartha, K and Mukherjee, S. (2016) "Cities, Urbanisation and Urban Systems (Settlement Geography)", Kitab Mahal, Allahabad - Singh, L. R. (2009) "Fundamentals of Human Geography", Sharda Pustak Bhawan, Allahabad - Singh, R. Y. (2012) "Geography of Settlements", Rawat Publications, Jaipur - Thakur S. A. (2012) "Settlement Geography"/ Vasti Bhugol- Konkan Geographers, Publication - Tiwari, R. C. (2016) "Geography of India", Pravalika Publications, Allahabad		

*Applicable for courses having practical components.

DSE-1			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	IV		
Name of the Course	Fundamentals of Biogeography		
Course Code	24L5.0-GEO-404		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	DSE		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. understand the basic ecological principles. 2. enrich understanding about distribution of plants and animals’ life on the earth. 3. aware about conservation of biotic resources and effects of industrial effluents on ecosystems. 4. acquaint with environmental hazards and bio reserves. 5* develop the skill of mapping ecological areas, flora and fauna.		
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			
Instructions for Paper- Setter			

Question 1 is compulsory consisting of five sub parts spread over entire syllabus (two marks for each sub parts), to be answered in 15-20 words. 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. Nature, scope and significance of biogeography. 2. Basic ecological principles: Bio-energy cycle in territorial ecosystem; energy budget of the earth; trophic levels and food web.	11
II	3. Distribution of plant life on the earth and its relation to soil, climate and human activities. 4. Geographical distribution of animal life on the earth and its relation to vegetation types, climate and human activities.	12
III	5. Communities: nature of communities and ecosystems: bio-diversities; human induced communities' change; habitat decay and conservation of biotic resources. 6. Industrial effluent and its effect on fresh water and marine biology.	11
IV	7. Environmental hazards: ecological consequences; human perception and adjustment with respect to flood, drought and earthquake. 8. Bio-Reserves in India; distribution and characteristics.	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. Identification of natural vegetation of neighborhood environment and interpretation of their characteristics. 2. Identification of wild animals of neighborhood environment and interpretation of their characteristics. 3. Mapping of forest area and percent of forest to geographical area of selected individual countries.	30

	4. Trend in population of selected wild animal species. 5. Trends in flood frequency and casualties in India for at least 2-3 decades. 6. Mapping of national parks and sanctuaries of India by suitable method. 7. Mapping the ecological hot spots of the world and interpretation of their characteristics. 8. Mapping the water bodies based on topographical sheets of an area. 9. Mapping the frequency or intensity of earthquakes and casualties of a geographical area. 10. Comparative analysis of seasonal variability of rainfall from different climatic reasons of India.	
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. Chandna R. C., (2002) Environmental Geography, Kalyani, Ludhiana. 2. Cox, C.D. and Moore, P.D. (1993) Biogeography: An Ecological and Evolutionary Approach, Blackwell. 3. Cunningham W. P. and Cunningham M. A., (2004) Principals of Environmental Science, McGraw hill, London. 4. Huggett, R.J. (1998) Fundamentals of Biogeography. Routledge, U.S.A. 5. Khushoo, T.N. and Sharma, M. (1991) Indian Geosphere-Biosphere Har-Anand Publication, Delhi. 6. Lllies, J. (1974) Introduction of Zoogeography, McMillan. London. 7. Mathur, H.S. (1998) Essentials of Biogeography, Anuj Printers, Jaipur. 8. MOEF (2006) National Environmental Policy-2006, Ministry of Environment and Forests, Government of India. 9. Odum, E. P. et al. (2005) Fundamentals of Ecology, Ceneage Learning India. 10. Pears, N. (1985) Basic Biogeography, Longman, London. 11. Simmon, I.G. (1974) Biogeography, Natural and Cultural, Longman, London. 12. Singh S. (1997) Environmental Geography, Prayag Pustak Bhawan. Allahabad.		

13. Tivy, J. (1992) Biogeography: A study of Plants in Ecosphere, Oliver and Boyd, U.S.A.
14. UNEP (2007) Global Environment Outlook: GEO4: Environment for Development,
15. United Nations Environment Programme.

Hindi Reading List

16. Singh, Savindra (2001) Paryavaran Bhugol, Prayag Pustak Bhawan, Allahabad.
17. Singh, Shri Narayan (1993) Vatavaran Bhugol, Tara Book Agency.

*Applicable for courses having practical component.

DSE-1			
Session: 2024-25			
Part A – Introduction			
Subject	Geography		
Semester	IV		
Name of the Course	Geography of Tourism		
Course Code	24L5.0-GEO-405		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	DSE		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. familiarization with the fundamentals of tourism geography 2. understand the types of tourism and their trend 3. acquaintance with tourism infrastructure and its impact 4. provide awareness of the carrying capacity of tourism destinations 5* attain skills in solving practical problems associated with tourism.		
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			
Instructions for Paper-Setter			

Question 1 is compulsory comprising five sub-parts spread over the entire syllabus (two marks for each sub-part), to be answered in 15-20 words. 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. Tourists and tourism. Nature, scope, approaches and significance of tourism. 2. Travel and tourism through ages. Role of geography in tourism industry.	11
II	3. Types of tourism and its importance. Development of tourism in India and other major tourist countries. 4. Trends of international and domestic tourism. Tourism motivation and tourism demand.	11
III	5. Tourism infrastructure; transport, accommodation, hospitality and other facilities. 6. Positive and negative impact of tourism: economic, political, socio-cultural and environmental.	11
IV	7. Carrying capacity: a tool for sustainable development 8. Tourism planning and policies.	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. State-wise distribution of tourists (Bar diagram). 2. Development of accommodations in India (comparative bar diagram). 3. Composition of tourists - states wise or of different tourist destinations (comparative bar). 4. Total, domestic, and foreign tourists (Compound bar diagram). 5. Tourism infrastructure (Trend graph). 6. Location and characteristics of highway tourism	30

	resorts of Haryana (dot method). 7. Tourist-population pressure (Bivariate method). 8. Explored and unexplored tourist destinations (Point 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. Bhatia, A. K., (1991) International Tourism: Fundamentals and Practices, Sterling Publishers, New Delhi. 2. Dhar, P.N. (2006) International Tourism: Emerging Challenges and Future Prospects. Kanishka, New Delhi. 3. Kaul R. N. () Dynamics of Tourism: Sterline Publisher Ltd. 4. Shinde S.B. () Geography of Tourism, Phadke Prakashan, Kolhapur. 5. Hall, M. and Stephen, P. (2006) Geography of Tourism and Recreation – Environment, Place and Space, Routledge, London. 6. Kamra, K. K. and Chand, M. (2007) Basics of Tourism: Theory, Operation and Practise, Kanishka Publishers, Pune. 7. Muluk, Musmade, Doke, More, (2021) Geography of Tourism-I, Nirali Publication, Pune. 8. Page, S. J. (2011) Tourism Management: An Introduction, Butterworth-Heinemann USA. Chapter 2. 9. 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). 10. Seth P.N. (1985) Successful Tourism Management: Sterling Publisher Ltd., New Delhi.		

*Applicable for courses having practical components.

CC-M4 (V)			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	IV		
Name of the Course	Introduction to Geographical Information System (GIS)		
Course Code	24L5.0-VOC-GEO-402		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	VOC		
Pre-requisite for the course (if any)	Elementary Knowledge of computer		
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1. understand what is GIS 2. the spatial and non-spatial data 3. the principle of making maps 4. integration of data into GIS and real time mapping 5*develop skills of computer map making		
Credits	Theory	Practical	Total
	03	01	04
Contact Hours	3	2	5
Max. Marks:100 Internal Assessment Marks:30 End Term Exam Marks: 70		Time: 3 hours	
Part B- Contents of the Course			
Question 1 is compulsory and comprise 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 questions from these by selecting at least one question from each unit. All			

questions carry equal marks.

Unit	Topics	Contact Hours
I	1. Geographical Information System (GIS): Definition, historical development and significance.	06
	2. Components of GIS- Hardware, software, data and sources of data.	05
II	3. The basis of GIS mapping: map projections, datum and coordinate systems	06
	4. GIS data type (spatial and non-spatial) and data sources	05
III	5. Data models: vector and raster.	06
	6. Data capture: input; editing and error correction.	06
IV	7. Application of GIS in resource mapping.	06
	8. Application of GIS in monitoring and management of resources.	05
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. Spatial data input in GIS format- Scanning and Geo-referencing (1 exercise). 2. digitization and creation of layers: Point, line and polygon (3 exercises). 3. Entry of non-spatial/ attribute data (1 exercise). 4. linking of spatial and non-spatial data (labelling) (1 exercise). 5. Display of data by choropleth method (1 exercise) 6. Making of layout (1 exercise).	
Suggested Evaluation Methods		

Internal Assessment: ➤ Theory • Class Participation:05 Marks • Seminar/presentation/assignment/quiz/class test etc.:05Marks • Mid-Term Exam:10 Marks ➤ Practicum • Class Participation: • Seminar/Demonstration/Viva-voce/Lab records etc.:10 Marks • Mid-Term Exam:	End Term Examination: 50 20
Part C-Learning Resources	
Recommended Books/e-resources/LMS: 1. Bhatta, B. (2010) Remote Sensing and GIS, Oxford University Publications. 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 Infomation 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.	

*Applicable for courses having practical component.

VAC-4			
Session: 2024-25			
Part A - Introduction			
Subject	Geography		
Semester	IV		
Name of the Course	Disaster Management		
Course Code	24L5.0-VAC-GEO-402		
Course Type: (CC/MCC/MDC/CCM/DSEC/VOC/ DSE/PC/AEC/VAC)	VAC		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLOs):	After completing this course, the learner will be able: 1. understand the meaning of hazard and disaster and its approaches and classification. 2. acquire knowledge about various fundamental concepts of hazard and disaster including technological interventions in the field. 3. develop an awareness regarding management of common hydrological disasters occurring in and around. 4. develop an understanding about the consequences and management of frequently occurring man-made hazards. 5* NA		
	Theory	Practical	Total
	2	0	2
Contact Hours	2	0	2
Max. Marks: 50 Internal Assessment Marks: 15 End Term Exam Marks: 35		Time: 03 Hours	
Part B- Contents of the Course			

<u>Instructions for Paper- Setter</u>		
Question 1 is compulsory comprising of seven sub parts spread over entire syllabus (one mark for each sub part), to be answered in 10-15 words. 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. Natural hazards and disasters: definition and approaches of study; classification of disasters.	3
	2. Disaster profile of India and world.	4
II	3. Concepts of disaster vulnerability and mitigation.	3
	4. Preventive measures and preparedness for disasters.	4
III	5. Flood: factors, vulnerability, consequences and management.	4
	6. Drought: Definition, nature, mitigation measures and management.	4
IV	7. Industrial disasters: major industrial disasters and their causes and consequences.	4
	8. Epidemics: Causes and consequences, Covid-19 a case study.	4
V*	NA	
Suggested Evaluation Methods		
Internal Assessment: ➤ Theory • Class Participation: 05 Marks • Seminar/presentation/assignment/quiz/class test etc.: 05Marks • Mid-Term Exam: 05Marks ➤ 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. Coch, NK (1994) Geohazards: Natural and Human, Pearson, New Delhi.
2. Cutter, SL (2006) Hazards Vulnerability and Environmental Justice, Routledge, London.
3. Gupta, HK (2013) Disaster Management, University Press, New Delhi.
4. Kapur, A (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
5. Modh, S (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, New Delhi.
6. Pine, JC (2014) Hazards Analysis: Reducing the Impact of Disasters, CRC Press, New Delhi.
7. Sinha, A (2001) Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
8. Smith, K (2013) Environmental Hazards: Assessing Risk and Reducing Disaster, Routledge, London.
9. Singh, RB (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
10. Singh, S (2000): Environmental Geography, Prayag Pustak Bhavan, Allahabad.
11. Stoltman, JP (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
12. Turk, J (1985) Introduction to Environmental Studies, Saunders Publications, Tokyo, Japan.

*Applicable for courses having practical component.



Chairperson
Department of Geography,
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Part A-Introduction			
Name of the Programme	U.G.		
Semester	V		
Nature of Course/Course Composition	Theory + Practical		
Name of the Course	Statistical Methods in Geography (Theory)		
Course Code	24L5.5-GEO- 501		
Course Type	CC-5, MCC-9		
Course Level	300-399		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ - Enrich understanding about types of data. CLO ₂ -Understand the basics of quantitative methods. CLO ₃ . Acquaint with data summarization and nuances of data. CLO ₄ -Skilled to data analysis and its presentation.		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B-Contents of the Course			
<u>Instructions for Theory Paper – Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Data organization and its types; Tabulation of data, Data Series, Frequency distribution of nominal, interval and ordinal data; class interval, ratios and rates.	CLO ₁	15
Unit-II	Measures of central tendency: Mean, Median and Mode, Measure of quartile, decile and percentile. Absolute measures of dispersion: range, quartile deviation, Mean deviation and standard deviation (grouped and ungrouped data).	CLO ₂	15
Unit-III	Relative measures of deviation: coefficient of variation, Location	CLO ₃	15

	quotient. Graphical presentation of data: histogram, frequency polygon and ogives. Basics of bivariate: Scatter diagram, Pearson's and Spearman's rank correlation.				
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: • Mapping/Graphic presentation of mean centre. • Mapping/Graphic presentation of median center. • Graphical presentation of mode. • Illustration of standard distance • Mapping/Graphical representation relative distance. • Exercise based on coefficient of variation. (Temperature and Rainfall variability across seasons and its mapping). (2) • Graphical presentation of Bi-variate data.	CLO ₄	30		
	Contact Hours	75			
Evaluation Methods					
Internal Assessment:30	TH-25	PR-5	End Term Examination: 70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	05	Written Examination	50	NA
Mid - Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C-Learning Resources					
Recommended Books/e-resources/LMS:					
• Gregory, S. (1964). <i>Statistical Methods and the Geographer</i>. Longman, London. • Gupta, C. B. (1974). <i>An Introduction to Statistical Methods</i>. Vikas Publishing House, New Delhi. • Johnston, R. J. (1989). <i>Multivariate Statistical Analysis in Geography: A Primer on the General Linear Model</i>. Longman Scientific & Technical, Harlow. • Mahmood, A. (1993). <i>Statistical Methods in Geographical Studies</i>. Rajesh Publications, New Delhi. • Pal, S. K. (1998). <i>Statistics for Geoscientists: Techniques and Applications</i>. Concept Publishing Company, New Delhi. • Hoshmand, A. R. (1998). <i>Statistical Methods for Environmental and Agricultural Sciences</i>. CRC Press, Boca Raton, Florida. • Levin, J., & Fox, J. A. (2006). <i>Elementary Statistics in Social Research</i> (10th ed.). Pearson Education, New Delhi. • Rogerson, P. A. (2010). <i>Statistical Methods for Geography: A Student's Guide</i> (3rd ed.). Sage Publications, New Delhi. • Sarkar, A. (2013). <i>Quantitative Geography: Techniques and Presentations</i>. Orient Blackswan Pvt. Ltd., New Delhi. • शर्मा, वीरेन्द्र प्रकाशन. (2021). रिसर्च मेथाडोलॉजी. पंचशील प्रकाशन, जयपुर. • मिश्रा, आर. एन., एवं शर्मा, पी. के. (2021). <i>प्रायोगिक भूगोल</i>. रावत पब्लिकेशन्स, जयपुर.					

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	1	-	-	1	-	2	2	2	-	-
CLO ₂	3	1	-	-	1	-	3	3	3	2	1
CLO ₃	3	2	1	1	2	1	3	3	3	2	2
CLO ₄	3	3	1	1	2	1	3	3	3	3	3

Content Mapping with NEP thrust areas

Field	Hours Devoted
Employability/Entrepreneurship	15
Skill Enhancement	60
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	-
Current Issues and Social Awareness	-
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A-Introduction			
Name of the Programme	U.G.		
Semester	V		
Nature of Course/Course Composition	Theory + Practical		
Name of the Course	Regional Development and Planning		
Course Code	24L5.5-GEO- 502		
Course Type	MCC-10		
Course Level	300-399		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ - Understand the concept of region and development and diversity. CLO ₂ - Enrich understanding regional growth and planning CLO ₃ -Acquaint with the concept of planning in India. CLO ₄ - Enhanced understanding of various planning methods.		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B-Contents of the Course			
<u>Instructions for Theory Paper – Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Region; meaning, basic concepts and types. Identification of region, elements of region. Development vs growth, Regional development and its dimensions, Regional disparity vs diversity, Balanced and unbalanced growth.	CLO ₁	15
Unit-II	Regional growth theories: Stage theory (Rostow), Harrod Domar model of development, Theory of cumulative causation and regional development (Myrdal). Regional Planning: definition and concept, Features of regional	CLO ₂	15

	planning, Role of regional planning in development.				
Unit-III	India in Five – year plans, NITI Aayog and its characteristics, Multi-level planning in India; The Drought Prone Areas Programme (DPAP) and backward area development plans. Metropolitan planning in India, Environmental issues in planning.	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: • Methods of delineating region (Fixed and variable method) (2) • Methods of mapping levels of regional development. (Ranking, division by mean, division by SD, standardization) (4). • Concentration and dispersal of tribes (1) • Similarity and dissimilarity index (1)	CLO ₄	30		
	Contact Hours	75			
Evaluation Methods					
Internal Assessment	TH-25	PR-05	End Term Examination:70	TH-50	PR-20
ClassParticipation:	5	0	Labrecord	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	05	Written Examination	50	NA
Mid – Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C-Learning Resources					
Recommended Books/e-resources/LMS:					
• Chandna, R.C. (2000). <i>Regional Planning: A Comprehensive Text</i>. Kalyani Publishers, New Delhi. • Chaudhuri, J.R. (2001). <i>An Introduction to Development and Regional Planning with Special Reference to India</i>. Orient Longman, Hyderabad. • Chand, M. & Puri, V.K. (1983). <i>Regional Planning in India</i>. Allied Publishers, New Delhi. • Misra, R.P. (1992). <i>Regional Planning: Concepts, Techniques, Policies and Case Studies</i>. Concept Publishing Company, New Delhi. • Misra, R.P. & Natraj, V.K. (1978). <i>Regional Planning and National Development</i>. Vikas Publishing House, New Delhi. • Sundaram, K.V. (1986). <i>Urban and Regional Planning in India</i>. Vikas Publishing House, New Delhi. • Raza, M. (1988). <i>Regional Development</i> (Vol. 10). Contribution to Indian Geography Series. Heritage Publishers, New Delhi. • Kapila, U. (2023). <i>Indian Economy Since Independence: A Comprehensive and Critical Analysis of India's Economy, 1947–2023</i>. Academic Foundation, New Delhi. • मौर्य, एस. डी. (2020). क्षेत्रीय योजना एवं विकास. प्रवालिका प्रकाशन, इलाहाबाद. • नाथ, विश्वम्भर. (2009). भारत में क्षेत्रीय विकास और योजना. कॉन्सेप्ट पब्लिशिंग कंपनी, नई दिल्ली.					

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	1	-	-	2	2	2	-	-
CLO ₂	3	-	--	2	1	-	3	3	3	-	1
CLO ₃	3	1	-	3	1	-	3	3	3	-	2
CLO ₄	2	3	-	1	1	-	2	3	3	3	3

Content Mapping with NEP thrust areas

Field	Hours Devoted
Employability/Entrepreneurship	10
Skill Enhancement	30
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	5
Current Issues and Social Awareness	10
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A-Introduction			
Name of the Programme	U.G.		
Semester	V		
Nature of Course/Course Composition	Theory + Practical		
Name of the Course	Geography of Trade and Transport		
Course Code	24L5.5-GEO- 503		
Course Type	DSE-2		
Course Level	300-399		
Pre-requisite for the course(if any)	N. A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ - Aware about the basic concept of trade and transport and its approaches. CLO ₂ - Assess the geographical aspects of trade and its significance. CLO ₃ - Study the relation of trade, transport development and its impact on economy. CLO ₄ - Understand the methods of represent the various aspects of trade and transport		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B- Contents of the Course			
Instructions for Theory Paper-Setter			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
Instructions for Practical Examiner			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Nature, scope, significance and development of transport Geography, Approaches of transportation geography. Geographical factors affecting the development of transportation. Elements of transportation, Distribution and economic significance of transportation in India.	CLO ₁	15
Unit-II	Meaning of trade and scope as tertiary activity. Economic - geographical aspects of trade. Internal, international and export trade.	CLO ₂	15

	Balance of trade and trading regions. Development of trade and its impact on economy.				
Unit-III	Problems of trade and transportation, role of technology in the developments of transportation. Government policies in development of trade and transportation. Major trade blocs of the world	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - • Import and export basket of India (Comparative bar). • Show the major import and export items with the help of polygraph. • State-wise distribution of trade (Bar diagram). • Composition of trade-states wise (comparative bar). • Total, domestic, and foreign trade (Compound bar diagram). • Draw expressways, trade corridors of India, freight train corridors of India (flow diagram). • Volume of trade (bar diagram). • Spatial and temporal share of trade in India (bar).	CLO ₄	30		
	Contact Hours		75		
Evaluation Methods					
Internal Assessment	TH-25	PR-5	EndTermExamination:70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	5	Written Examination	50	NA
Mid – Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C-Learning Resources					
Recommended Books/e-resources/LMS:					
• Robinson, H., & Bamford, C. G. (1978). <i>Geography of Transport</i>. Macdonald & Evans Publishers, Plymouth. • Saxena, H. M. (2022). <i>Transport Geography</i>. Rawat Publications, Jaipur. • Hussain, M. (1999). <i>Human Geography</i>. Rawat Publications, Jaipur. • Raza, M., & Aggarwal, Y. (1986). <i>Transport Geography of India: Commodity Flows and the Regional Structure of the Indian Economy</i>. Concept Publishing Company, New Delhi. • O'Dell, A. C., & Richards, R. S. (1971). <i>Railways and Geography</i>. Hutchinson University Library, London. • Seaby, K. R. (1966). <i>The Geography of Air Transport</i>. Hutchinson University Library, London. • Taaffe, E. J., Gauthier, H. L., & O'Kelly, M. E. (1996). <i>Geography of Transportation</i> (2nd ed.). Prentice Hall, Englewood Cliffs, NJ. • गर्ग, एच. एस., एवं सिंह, अविनाश कुमार. (2025). <i>परिवहन एवं व्यापार भूगोल</i>. एस.बी.पी.डी. पब्लिकेशन्स, आगरा.					

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁	PSO ₁	PSO ₂
CLO ₁	3	-	-	1	1	-	2	2	2	-	-	3	1
CLO ₂	3	1	-	2	1	-	3	3	3	-	1	3	2
CLO ₃	3	1	-	3	1	-	3	3	3	1	2	3	2
CLO ₄	2	3	-	1	1	-	2	3	3	3	3	2	3

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	18
Skill Enhancement	45
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	4
Current Issues and Social Awareness	4
Women empowerment/ Gender issues	-
Public policies	4
Any Other	-

Part A-Introduction			
Name of the Programme	U. G.		
Semester	V		
Nature of Course/Course Composition	Theory+Practical		
Name of the Course	Cultural Geography		
Course Code	24L5.5-GEO- 504		
Course Type	DSE-2		
Course Level	300-399		
Pre-requisite for the course (if any)	Nil		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO1-Study the nature, scope and approaches of cultural geography. CLO2 - Understand the origin and evolution of human races and cultural regions of the world. CLO3- Aware about the origin of human settlements and impact of technology on culture CLO4 – Develop the skills to represent cultural data through different cartographic techniques.		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B- Contents of the Course			
<u>Instructions for Theory Paper - Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Cultural Geography: definition, nature and scope; elements and significance of cultural geography. Historical development of cultural geography; approaches of cultural geography. Relation of cultural geography with other field of studies	CLO ₁	15
Unit-II	Origin and evolution of man, basis of cultural diversity: race, religion and language. Cultural world: realm and regions of the world.	CLO ₂	15

	Human races and their classification (Griffith Taylor), Tribes of India (Santhal, Gond, Todda, Naga and Bhil).				
Unit-III	Origin and evaluation of human settlements, Pattern of livelihood: economic activities and cultural adaptation. Impact of technological changes on culture with special reference to settlement, agriculture and livelihood.	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - • Distribution of major languages in the world (1 exercise). • Racial distribution of India and world (2 exercises) • Patterns of human settlements (1 exercise). • Distribution of tribal groups of India (1 exercise). • Major cultural heritage sites of India by UNESCO (1 exercise). • Distribution of cultural regions of the world (1 exercise) • Distribution of major crops/industries in India (1 exercise).	CLO ₄	30		
	Contact Hours	75			
Evaluation Methods					
Internal Assessment:30	TH-25	PR-05	End Term Examination:70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	05	Written Examination	50	NA
Mid –Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C-Learning Resources					
Recommended Books/e-resources/LMS: • Anderson, K. (2007). <i>Race and Crises of Human Development</i>. Routledge, London. • Béteille, A. (1983). <i>Equality and Inequality</i>. Oxford University Press, New Delhi. • Cavallaro, D. (2001). <i>Critical and Cultural Theory: Thematic Variations</i>. The Athlone Press, London. • Coates, B. E., Johnston, R. J., & Knox, P. L. (1977). <i>Geography and Inequality</i>. Oxford University Press, Oxford. • Crang, M. (1998). <i>Cultural Geography</i>. Routledge, London. • Dubey, S. C. (1991). <i>Indian Society</i>. National Book Trust, New Delhi. • Haq, M. U. (2000). <i>Reflections on Human Development</i>. Oxford University Press, New Delhi. • Norton, W. (2006). <i>Cultural Geography: Environments, Landscapes, Identities, Inequalities</i> (2nd ed.). Oxford University Press, Toronto. • Planning Commission, Government of India. (1981). <i>Report on Development of Tribal Areas</i>. Government of India, New Delhi. • Robertson, I., & Richards, P. (2003). <i>Studying Cultural Landscapes</i>. Arnold, London. • Sahlins, M. D. (1968). <i>Tribesmen</i>. Prentice-Hall, Englewood Cliffs, NJ. • Smith, D. M. (1977). <i>Human Geography: A Welfare Approach</i>. Edward Arnold, London. • Sopher, D.E. (1980). <i>An Exploration of India: Geographical Perspectives on Society and Culture</i>. Cornell University Press, Ithaca, NY.					

- Subbarao, B. (1958). *Personality of India*. Faculty of Arts, Maharaja Sayajirao University of Baroda, Baroda.
- शालिनी, & मौर्य, एस. डी. (2023). सांस्कृतिक भूगोल. शारदा पब्लिकेशन, प्रयागराज.

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	-	1	-	2	1	2	-	-
CLO ₂	3	1	-	2	1	-	3	2	3	-	-
CLO ₃	3	1	-	3	1	-	3	3	3	1	1
CLO ₄	2	3	-	-	1	-	2	3	3	3	3

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	30
Communication Development	-
Indian Knowledge System	5
Environmental Awareness	15
Current Issues and Social Awareness	25
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A-Introduction			
Name of the Programme	U. G.		
Semester	V		
Nature of Course/Course Composition	Theory + Practical		
Name of the Course	Geography of Disaster Management		
Course Code	24L5.5-GEO- 505		
Course Type	DSE - 3		
Course Level	300-399		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ – Study the fundamental aspects of disaster and hazards. CLO ₂ – Understand the mechanism of disaster classification. CLO ₃ - Aware about the causes, effects and control measures of different hazards. CLO ₄ – Identify and map the disaster and hazards effected areas		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	5	30
End Term Exam Marks	50	20	70
Max. Marks	75	30	100
Examination Duration (in Hours)	3	2	
Part – B-Contents of the Course			
<u>Instructions for Theory Paper - Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Geography and disasters: occurrence of major disasters in world and India. Natural hazards and disasters: nature, classification and causes.	CLO ₁	15
Unit-II	Tectonic hazards: causes, effects and control measures of earthquakes and tsunamis. Geological hazards: causes, effects and control measures of landslides and volcanoes. Meteorological hazards: causes, assessment, effects and control measures of cyclones and cloud bursts. Hydrological hazards: causes, assessment, effects and control measures of floods and droughts.	CLO ₂	15

Unit-III	Human induced disasters: causes, assessment, effects and control measures of oil spills and stampedes. Disaster management in India: policy and organizational setup.	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - - Mapping and demarcation of hazard prone areas in the district / state (1 exercise). - Analysis of extreme rainfall events in district / state (1exercise). - Plotting of annual distribution of occurrence of cyclones in India (1exercise). - Plotting of annual distribution of flood mortalities in Haryana since2000 (1 exercise). - Plotting of decadal distribution of flood prone and flood affected area in Haryana since 1966 (1 exercise). - Plotting of progress of flood forecasting stations in India (1exercise). - Mapping of district-wise heat wave mortalities in Haryana (1 exercises). - Mapping of district-wise cold wave mortalities in Haryana (1 exercise).	CLO ₄	30		
	Contact Hours	75			
Evaluation Methods					
Internal Assessment:30	TH-25	PR-5	End Term Examination:70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab. records etc.:	NA	5	Written Examination	50	NA
Mid – Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C-Learning Resources					
Recommended Books/e-resources/LMS:					
- Alexander, D. (1993). <i>Natural Disasters</i>. Springer, Berlin. - Carter, N. W. (2008). <i>Disaster Management: A Disaster Manager's Handbook</i>. Asian Development Bank (ADB), Manila. - Coch, N. K. (1994). <i>Geohazards: Natural and Human</i>. Pearson Education, New Delhi. - Cutter, S. L. (2006). <i>Hazards, Vulnerability and Environmental Justice</i>. Routledge, London. - Gupta, H. K. (2013). <i>Disaster Management</i>. Universities Press, New Delhi. - Hewitt, K. (1997). <i>Regions of Risk: A Geographical Introduction to Disasters</i>. Addison Wesley Longman, Harlow. - Kusky, T. (2012). <i>Encyclopedia of the Hazardous Earth</i>. Viva Books, New Delhi. - Kapur, A. (2010). <i>Vulnerable India: A Geographical Study of Disasters</i>. Sage Publications, New Delhi. - Modh, S. (2010). <i>Managing Natural Disasters: Hydrological, Marine and Geological Disasters</i>. Macmillan India, New Delhi.					

- Ministry of Home Affairs, Government of India. (2009). *National Policy on Disaster Management*. Government of India, New Delhi.
- Pine, J. C. (2015). *Hazards Analysis: Reducing the Impact of Disasters*. Routledge, London.
- Singh, R. B. (2006). *Natural Hazards and Disaster Management: Vulnerability and Mitigation*. Rawat Publications, New Delhi.
- Singh, S. & Singh, J. (2013). *Disaster Management*. Pravalika Publications, Allahabad.
- Sinha, A. (2001). *Disaster Management: Lessons Drawn and Strategies for Future*. National Centre for Disaster Management, Indian Institute of Public Administration, New Delhi.
- गर्ग, एच. एस. (2016). *आपदा प्रबंधन*. साहित्य भवन पब्लिकेशन्स, आगरा.
- सिंह, सविन्द्र. (2022). *आपदा प्रबंधन*. प्रवालिका पब्लिकेशन्स, प्रयागराज.
- पाठक, गणेश कुमार. (2021). *आपदा प्रबंधन*. राजेश पब्लिकेशन्स, नई दिल्ली.

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	2	1	-	-	2	-	1	-	-	-
CLO ₂	3	3	2	1	1	2	-	1	-	-	-
CLO ₃	3	3	3	2	2	2	1	2	1	-	1
CLO ₄	2	3	3	3	3	2	3	3	2	2	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	30
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	25
Current Issues and Social Awareness	10
Women empowerment/ Gender issues	-
Public policies	5
Any Other	-

Part A – Introduction			
Name of the Programme	U. G.		
Semester	V		
Nature of Course/Course Composition	Theory + Practical		
Name of the Course	Geography of Water Resources		
Course Code	24L5.5-GEO- 506		
Course Type	DSE – 3		
Course Level	300-399		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ - Understand the fundamental issues pertaining to water resources. CLO ₂ – Study the basics of ground water and watershed. CLO ₃ - Review the conflicts of water resources and role of different commissions. CLO ₄ - Identify and map the disaster and hazards effected areas water resource regions		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	5	30
End Term Exam Marks	50	20	70
Max. Marks	75	30	100
Examination Duration (in Hours)	3	2	
Part – B- Contents of the Course			
<u>Instructions for Theory Paper - Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Water resource: its importance and types; contemporary water crisis (stress)- causes and consequences; factors affecting water resources development. Surface water: use, issues and management for irrigation and hydropower development. Big and small irrigation projects and their impact on water resources with reference to India	CLO ₁	15
Unit-II	Ground water: assessment and development, depletion (regional pattern and consequences) and measures of conservation. Water quality and its parameters; sources, types and impacts of water pollution.	CLO ₂	15

	Watershed: concept and delineation; its types and functions; principles and significance of integrated watershed management.				
Unit-III	Politics regarding conflicts over water resource: river water sharing disputes with examples from world (Brahmaputra, Indus, Teesta) and India (Cauvery, Krishna, Yamuna). National water grid (river linking). Central Water Commission and Water Tribunals and their role.	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - - Mapping and demarcation of different size and shape of watersheds (2 exercises). - Analysis of extreme rain fall in dices (2exercises). - Derivation of water balance chart (2 exercises). - Mapping of major wet lands in a district and computation of shape and size (area) for classification (1 exercise). - Preparation of a map of a nearby wetland and to identify the changes in dimension, water level changes and encroachments it faced in the last one decade. Presentation of data in tabular form along with a map (field-based) (1 exercise).	CLO ₄	30		
	Contact Hours		75		
Evaluation Methods					
Internal Assessment:30	TH-25	PR-05	End Term Examination:70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	05	Written Examination	50	NA
Mid - Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C-Learning Resources					
RecommendedBooks/e-resources/LMS:					
- Brutsaert, W. (2005). <i>Hydrology: An Introduction</i>. Cambridge University Press, Cambridge. - Dingman, S. L. (2002). <i>Physical Hydrology</i> (2nd ed.). Prentice Hall, Upper Saddle River. - Gurjar, R. K. & Jat, B. C. (2008). <i>Geography of Water Resources</i>. Rawat Publications, Jaipur. - Karanth, K. R. (1989). <i>Hydrology</i>. Tata McGraw-Hill Publishing Company, New Delhi. - Mather, J. R. (1984). <i>Water Resources: Distribution, Use, and Management</i>. John Wiley & Sons, New York. - Newson, M. D. (1992). <i>Land, Water and Development: River Basin Systems and Their Sustainable Management</i>. Routledge, London. - Raghunath, H. M. (2006). <i>Hydrology: Principles, Analysis and Design</i> (2nd ed.). New Age International Publishers, New Delhi. - Reddy, P. J. R. (2005). <i>A Textbook of Hydrology</i>. Firewall Media, New Delhi. - Tideman, E. M. (1996). <i>Watershed Management: Guidelines for Indian Conditions</i>. Omega Scientific Publishers, New Delhi. - Todd, D. K. & Mays, L. W. (2005). <i>Groundwater Hydrology</i> (3rd ed.). John Wiley & Sons, New York. - Vaidyanathan, A. (2008). <i>Water Resources: Contemporary Issues on Irrigation</i>. Oxford					

University Press, New Delhi.

- गुर्जर, रामकुमार एवं जाट, बी. सी. (2005). *जल संसाधन भूगोल*. रावत बुक्स, जयपुर.

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	-	1	-	2	-	2	-	-
CLO ₂	3	-	-	2	1	-	3	2	3	1	-
CLO ₃	3	1	-	3	1	-	3	3	3	2	2
CLO ₄	2	3	-	3	1	-	3	3	3	3	3

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	30
Communication Development	-
Indian Knowledge System	5
Environmental Awareness	25
Current Issues and Social Awareness	10
Women empowerment/ Gender issues	-
Public policies	5
Any Other	-

Part A-Introduction			
Name of the Programme	U. G.		
Semester	VI		
Nature of Course /Course Composition	Theory + Practical		
Name of the Course	Fundamentals of Remote Sensing		
Course Code	24L5.5-GEO- 601		
Course Type	CC-6, MCC-11		
Course Level	300-399		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ - Understand the concept of remote sensing. CLO ₂ - Enrich understanding about satellite images and aerial photographs. CLO ₃ - Ecquaint with the various space programmes. CLO ₄ - Develop the skill of using satellite data, interpretation and analysis.		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B -Contents of the Course			
<u>Instructions for Theory Paper - Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Introduction to remote sensing: nature, scope and significance, historical development of remote sensing Types and process of remote sensing, remote sensing sensors and characteristics.	CLO ₁	15
Unit-II	Aerial photography- process and factors affecting aerial photography, Aerial photograph- types, and elements of air photo interpretation. Photogrammetry- basic concepts (principal	CLO ₂	15

	point, fiducial marks, and overlapping). Aerial photo mosaic.				
Unit-III	Indian Space Programme, Indian remote sensing satellites and their characteristics. Applications of aerial photographs and satellite remote sensing in geographical studies and management of natural resources.	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - Information recorded on aerial photographs and satellite imageries. (2) - Determination of Principal point and flight line. (1) - Determination of scale of aerial photographs. (2) - Use of stereoscope and making of 3D (using Zeiss card, features on air photo) (1) - Interpretation of aerial photographs: physical and socio-cultural features. (2)	CLO ₄	30		
	Contact Hours		75		
Evaluation Methods					
Internal Assessment:30	TH-25	PR-5	End Term Examination: 70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	05	Written Examination	50	NA
Mid-Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C -Learning Resources					
Recommended Books/e-resources/LMS:					
- Aggarwal, C. S., and Garg, P. K. (2002). Textbook on remote sensing in natural resources monitoring and management. A. H. Wheeler & Co. Ltd. - Campbell, J. B., & Wynne, R. H. (2011). Introduction to remote sensing (5th ed.). Guilford Press. - Jensen, J. R. (2013). Remote sensing of the environment: An earth resource perspective (2nd ed.). Pearson Education India. - Lillesand, T. M., & Kiefer, R. W. (1994). Remote sensing and image interpretation (3rd ed.). John Wiley & Sons. - Kumar, M. (2000). Textbook on remote sensing. NCERT. - Nag, P., & Kudrat, M. (2002). Remote sensing and image interpretation. Concept Publishing Company. - Reddy, A. (2000). Remote sensing and geographical information system: An introduction. B. S. Publications. - चौनियाल, देवीदत्त. (2010). सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली. शारदा पुस्तक भवन. - नाग, प्रथ्वीश, चंद्रशेखर, एवं देबनाथ, गोपाल चंद्र. (2016). भौगोलिक सूचना विज्ञान. भारतीय प्रकाशन.					

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	-	1	-	2	-	2	1	-
CLO ₂	3	1	-	-	1	-	2	2	3	2	1
CLO ₃	3	-	-	1	1	-	1	-	2	1	-
CLO ₄	2	2	-	-	1	-	3	3	3	3	3

Content Mapping with NEP thrust areas

Field	Content/s
Employability/Entrepreneurship	10
Skill Enhancement	60
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	5
Current Issues and Social Awareness	2
Women empowerment/ Gender issues	-
Public policies	3
Any Other	-

Part A-Introduction			
Name of the Programme	U. G.		
Semester	VI		
Nature of Course /Course Composition	Theory + Practical		
Name of the Course	Urban Geography		
Course Code	24L5.5-GEO- 602		
Course Type	MCC-12		
Course Level	300-399		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO₁-Understand the basics of urban geography, and origin of urbanization. CLO₂ – Study the extension of urbanization and basic theories. CLO₃ – Aware about the problems and planning related to urbanization. CLO₄ – Learn the skills in mapping of data related to urbanization.		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B -Contents of the Course			
<u>Instructions for theory paper - setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the course learning outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for practical examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the course learning outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Definition, nature, scope and significance of urban geography, basic concepts of urban geography. Origin and growth of urbanization in world and India, their process and geographical distribution.	CLO ₁	15
Unit-II	Urbanization and Urban Sprawl- causes and consequences, Growth and distribution of Urban center, City, Metropolitan and Megalopolis. Theories of urban internal structure: concentric zone theory, sector theory and multiple nuclei model. Central place theory by Christaller &	CLO ₂	15

	Losch.				
Unit-III	Urbanization and Environment, Slums, Urban problems- causes, consequences and mitigation strategies. Urban planning: concept, need and types; historical development urban planning in India with special reference to ancient and modern cities.	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - • Locating the megalopolis on world map (1exercise). • Hierarchical representation of size class towns as per census of India through compound bar diagram (1 exercise). • Representation of population of major cities of world through proportionate circle (1 exercise). • State-wise level of urbanization in India through choropleth method (1 exercise). • Diagrammatic representation of size and number of different size class urban centers by applying Zipf method (1 exercise) • Diagrammatic representation of urban land use model (2 exercises). • Representing the layout plan of any planned city of India (1 exercise).	CLO ₄	30		
	Contact Hours		75		
Evaluation Methods					
Internal Assessment	TH-25	PR-5	End Term Examination: 70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	05	Written Examination	50	NA
Mid-Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C -Learning Resources					
Recommended Books/e-resources/LMS: • Carter, H. (1984). <i>The study of urban geography</i>. Arnold Publishers. • Taylor, G. T. (2007). <i>Urban Geography: A study of site, evolution, pattern and classification in villages, towns and cities</i>. Routledge. • Hall, T., & Barrett, H. (2018). <i>Urban Geography</i> (5th ed.). Routledge. • Johnston, R. J. (2007). <i>City and society: An outline for urban geography</i>. Routledge. • Kaplan, D., Wheeler, J., & Holloway, S. (2009). <i>Urban geography</i>. John Wiley & Sons. • Knox, P. L., & McCarthy, L. (2005). <i>Urbanization: An introduction to urban geography</i> (2nd ed.). Pearson Prentice Hall. • Mandal, R. B. (2008). <i>Urban geography: A text-book</i>. Concept Publishing Company. • Maurya, S. D. (2018). <i>Urban geography</i>. Sharda Pustak Bhawan. • Pacione, M. (2009). <i>Urban geography: A global perspective</i> (3rd ed.). Routledge. • Rao, B. P., & Sharma, N. (2001). <i>Urban geography</i>. Vasundhara Prakashan. • Siddhartha, K., & Mukherjee. (2019). <i>Cities, urbanization and urban systems (Settlement geography)</i>. Kitab Mahal Publishers. • Singh, A. K. (2021). <i>Fundamentals of urban geogrophy</i>. K. K. Publications.					

- Singh, R. Y. (2012). *Geography of settlements*. Rawat Publications.
- Singh, S., & Saroha, J. (2021). *Urban geography*. Pearson Education.
- Verma, L. N. (2006). *Urban geography*. Rawat Publications.
- बंसल, एस. सी. (2008). *नगरीय भूगोल*. मीनाक्षी प्रकाशन.
- सिंह, आर. एन., एवं मौर्या, एस. डी. (2022). *नगरीय भूगोल*. शारदा पुस्तक भवन.

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	1	1	-	2	-	2	-	-
CLO ₂	3	-	-	2	1	-	2	2	3	-	1
CLO ₃	3	-	-	-	1	-	2	1	3	1	-
CLO ₄	2	2	-	3	1	-	3	3	3	3	3

Content Mapping with NEP thrust areas

Field	Content/s
Employability/Entrepreneurship	-
Skill Enhancement	40
Communication Development	-
Indian Knowledge System	5
Environmental Awareness	10
Current Issues and Social Awareness	10
Women empowerment/ Gender issues	-
Public policies	5
Any Other	-.

Part A – Introduction			
Name of the Programme	U. G.		
Semester	VI		
Nature of Course /Course Composition	Theory + Practical		
Name of the Course	Political Geography		
Course Code	24L5.5-GEO- 603		
Course Type	DSE-4		
Course Level	300-399		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ – Familiarization with the basic concept of political geography. CLO ₂ - Augmentation of knowledge about state, nation and their boundaries. CLO ₃ – Understand the India's relation with neighboring countries and geopolitics. CLO ₄ - awareness and mapped the changing political issues.		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B -Contents of the Course			
<u>Instructions for Theory Paper - Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Nature, scope and concepts of political geography. Development of political geography. Relation of political geography with other disciplines. Approaches to the study of political geography.	CLO ₁	15
Unit-II	The state: concept and evolution; nation, and the nation-states. Frontiers and boundaries; demarcation, classification and functions of boundaries.	CLO ₂	15

	Land locked state and their advantages and disadvantages; Heartland theory. Systems of governmental organization: unitary and federal.				
Unit-III	India's relationships with neighboring countries; emergence of India as regional power: aspiration and challenges. Geo-political significance of Indian ocean; Kashmir problem: POK and Aksai chin. Recent scenario of India's geo politics.	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises and 1 assignment on the below mentioned themes: - • Identification of boundaries (genetic and morphological) on global map. • Formation of states in India since independence. • Formation of districts in Haryana since 1966. • Changing parliament constituency boundaries in Haryana since 1966. • Changing assembly constituency boundaries in Haryana since 1966. • Identification of land locked states on world map. • Assignment based on field visit regarding political perception/views of people.	CLO ₄	15		
	Contact Hours		75		
Evaluation Methods					
Internal Assessment:30	TH-25	PR-05	End Term Examination: 70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	05	Written Examination	50	NA
Mid-Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C -Learning Resources					
Recommended Books/e-resources/LMS: • Adhikari, S. (1997): <i>Political geography</i>, Rawat Publications. • Cox, K. R. (2002): <i>Political geography: Territory, state and society</i>, Wiley-Blackwell. • Deshpande, C. D. (1992): <i>India: A regional interpretation</i>, Northern Book Centre. • Dikshit, R. D. (1999): <i>Developments in Political Geography: A Century of Progress</i>, Sage Publications. • Glassner, M. I., De Blij, H. J., and Yacher, L. (1980): <i>Systematic political geography</i>, John Wiley. • Short, J. R. (2002): <i>An Introduction to Political Geography</i>, Routledge. • Prescott, J. R. V. (2014): <i>The geography of frontiers and boundaries</i>, Routledge. • तिवारी, आर. सी. (2007): <i>राजनीतिक भूगोल</i>, प्रवालिका प्रकाशन, इलाहाबाद । • दीक्षित, आर. डी. (2000): <i>राजनीतिक भूगोल</i>, प्रेंटिस हॉल ऑफ इंडिया प्राइवेट लिमिटेड ।					

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	-	1	-	1	-	2	-	-
CLO ₂	3	-	-	2	1	-	2	1	3	1	-
CLO ₃	3	-	-	2	1	-	2	2	3	1	-
CLO ₄	2	2	-	3	1	-	3	3	3	2	2

Content Mapping with NEP thrust areas

Field	Content/s
Employability/Entrepreneurship	-
Skill Enhancement	35
Communication Development	-
Indian Knowledge System	-.
Environmental Awareness	-
Current Issues and Social Awareness	25
Women empowerment/ Gender issues	-
Public policies	10
Any Other	-

Part A-Introduction			
Name of the Programme	U.G.		
Semester	VI		
Nature of Course /Course Composition	Theory + Practical		
Name of the Course	Agricultural Geography		
Course Code	24L5.5-GEO-604		
Course Type	DSE-4		
Course Level	300-399		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ - familiarize with the basics of agricultural geography. CLO ₂ - understand the crop pattern and agriculture regions. CLO ₃ - understand the land use pattern and India's agriculture regions . CLO ₄ -Learn the skills in mapping of agricultural data through different cartographic techniques.		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B -Contents of the Course			
<u>Instructions for Theory Paper - Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Definition, nature and scope of agricultural geography, approaches to agricultural geography. Physical, cultural and institutional factors affecting agriculture. Indian agriculture; characteristics and types.	CLO ₁	15
Unit-II	Types of Crops, Crop combination and crop diversification.	CLO ₂	15

	Agricultural regions- basic aspects of demarcation of agricultural regions, Whittlesey’s Agriculture Regions and their characteristics.				
Unit-III	Land use pattern with special reference to India. Rainbow agricultural revolution in India. Major Agriculture regions in India; Problems associated with Indian agriculture. Agricultural planning and policies in India.	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - - Representation of crop calendar using Ergo graph (one exercise) - Preparation of crop-combination and crop diversification method (2 exercises) - Determination and mapping of cropping and irrigation intensity by bivariate method (one exercise) - Preparation and interpretation of different cereals through polygraph (one exercise) - Different methods representing the production and distribution of crops (2 exercises) - Prepare a proportional circle for showing land use pattern of India (one exercise)	CLO ₄	30		
	Contact Hours		75		
Evaluation Methods					
Internal Assessment:30	TH-25	PR-05	End Term Examination: 70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	05	Written Examination	50	NA
Mid-Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C -Learning Resources					
Recommended Books/e-resources/LMS:					
- Basu, D.N., and Guha, G.S. (1996): <i>Agro-climatic Regional Planning in India: Themes and case studies, Vol. I & II</i>, Concept Publication, New Delhi. - Bryant, C. R., Johnston, T.R. (1992): <i>Agriculture in the City Countryside</i>, Belhaven Press, London. - Burger, A. (1994): <i>The Agriculture of the World</i>, Aldershot, England. - Hussain, M. (1978): <i>Agricultural Geography</i>, Rawat Publication. - Ilbery, B. W. (1985): <i>Agricultural Geography: A Social and Economic Analysis</i>, Oxford University Press. - Mohammad, N. (1992): <i>New Dimension in Agriculture Geography, Vol. I to VIII</i>, Concept Pub., New Delhi. - Roling, N.G., and Wagemakers, M. A. E. (2000): <i>Facilitating Sustainable Agriculture: Participatory Learning and Adaptive Management in Times of Environmental Uncertainty</i>,					

Cambridge University Press, Cambridge.

- Shafi, M. (1993): *Agricultural Geography*, Dorling Kindersley India Pvt. Ltd., New Delhi.
- Singh, J., and Dhillon, S.S. (1984): *Agricultural Geography*, Tata McGraw Hill, New Delhi.
- गौतम, अल्का (2023): *कृषि भूगोल*, शारदा पब्लिकेशन।
- हुसैन, माजिद (2000): *कृषि भूगोल*, रावत पब्लिकेशन।

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	-	1	-	1	-	2	-	-
CLO ₂	3	-	-	-	1	-	2	2	3	1	-
CLO ₃	3	-	-	2	1	-	2	2	3	1	1
CLO ₄	2	1	-	3	1	-	3	3	3	2	2

Content Mapping with NEP thrust areas

Field	Content/s
Employability/Entrepreneurship	-
Skill Enhancement	35
Communication Development	-
Indian Knowledge System	5
Environmental Awareness	15
Current Issues and Social Awareness	10
Women empowerment/ Gender issues	-
Public policies	5
Any Other	-

Part A-Introduction			
Name of the Programme	U. G.		
Semester	VI		
Nature of Course /Course Composition	Theory + Practical		
Name of the Course	Elementary Soil Geography		
Course Code	24L5.5-GEO- 605		
Course Type	DSE-5		
Course Level	300-399		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ . Understands the basic concepts related to soil and various factors and processes of soil formation. CLO ₂ . Recognize various properties of soil and its distribution. CLO ₃ –Learn about the causes of Soil erosion and conservation . CLO ₄ –Aware about the techniques to represent soil properties .		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B -Contents of the Course			
<u>Instructions for Theory Paper - Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Nature, scope and significance of soil geography and its relationship with pedology and edaphology. Soil formation- factors (parent material, organic matter, climate, topography, and spatio-temporal dimensions), Process of soil formation.	CLO ₁	15
Unit-II	Development of soil profile and soil horizon, physical and	CLO ₂	15

	chemical properties of soils. Evaluation of land and soil; Land capability classification. Soils: classification and global distribution.				
Unit-III	Soil erosion and degradation- causes and consequences. Soil development and conservation- methods and significance.	CLO ₃	15		
Practical 1	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - •Taking soil profile in the field (1exercise). •Identification of soil parent material (1 exercise). •Determining soil texture through feel method (2 exercises). •Making of soil textural diagram (2exercises). •Determination of soil structure (2exercise).	CLO ₄	30		
	Contact Hours		75		
Evaluation Methods					
Internal Assessment: 30	TH-25	PR-5	End Term Examination: 70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	5	Written Examination	50	NA
Mid-Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C -Learning Resources					
Recommended Books/e-resources/LMS:					
• Birkeland, P. (1999): Soils and Geomorphology, Oxford University Press. • Brady, N. C., and Weil, R. R. (2008): The Nature and Properties of Soils, Prentice Hall. • Gupta, K. K. and Tyagi, V. C. (1992): Working with Maps, Survey of India Publication. • Singh, G. (1996): Map Work and Practical Geography, Vikas Publication, New Delhi. • Subbarao, K. V. and Vaidyanadhan, R. (2016): Landforms of India from Top maps and Images, Geological Society of India (Online). • Vaidyanadhan, R. (1968): Index to a Set of Sixty Topographic Maps: Illustrating Specified Physiographic Features from India, Council of Scientific and Industrial Research, Ministry of Education, Government of India. • ब्रैडली मिलर और आर्दुरो फ्लोरेस (2023): मृदा भूगोल, प्रेस बुक्स द्वारा संचालित (Online).					

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	-	1	-	2	-	2	1	-
CLO ₂	3	-	-	-	1	-	3	2	3	2	1
CLO ₃	3	-	-	2	1	-	2	2	3	1	-
CLO ₄	2	1	-	3	1	-	3	3	3	3	3

Content Mapping with NEP thrust areas

Field	Content/s
Employability/Entrepreneurship	-
Skill Enhancement	35
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	25
Current Issues and Social Awareness	10
Women empowerment/ Gender issues	-
Public policies	5
Any Other	-

Part A-Introduction			
Name of the Programme	U. G.		
Semester	VI		
Nature of Course /Course Composition	Theory + Practical		
Name of the Course	Introduction to Population Geography		
Course Code	24L5.5-GEO- 606		
Course Type	DSE-5		
Course Level	300-399		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ – Gain knowledge about the basic concepts of population geography. CLO ₂ – Understand the composition of population. CLO ₃ – Familiarize about the pattern of occupational structure and migration CLO ₄ – Develop the skill of mapping of demographic data.		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B -Contents of the Course			
<u>Instructions for Theory Paper - Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Definition, nature, scope and significance of population geography. Approaches to study population geography, and its relation with other subjects. Sources of population data: census, civil registration system, and sample survey.	CLO ₁	15
Unit-II	Distribution, density and growth of human population: determinants and world pattern. Age and sex composition of	CLO ₂	15

	population: pattern, determinants and impacts. Literacy: difference between literacy and education, world pattern and determinants of literacy rate and gender gaps in literacy.				
Unit-III	Occupational structure of population: pattern and determinants; work participation rate (WPR) gender gaps in WPR, dependency ratio. Migration: concepts, types, factors and impacts, theories of migration (Everett Lee, Duncan, Standing and Lewis), Recent trends of migration.	CLO ₃	15		
Practical	Practical Record: A projectfileconsistingof8exercisesonthe below mentioned themes: - • Methods of representing population distribution and density (2exercisesthe). • Spatial and temporal growth of world population (2 exercises). • Composition of population (1exercisesthe). • Methods of representing occupational structure, types of workers and work participation rates (2 exercises). • Methods of representing gender gap in literacy rate (1 exercise).	CLO ₄	30		
	Contact Hours		75		
Evaluation Methods					
Internal Assessment: 30	TH-25	PR-05	End Term Examination: 70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	5	Written Examination	50	NA
Mid-Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C -Learning Resources					
Recommended Books/e-resources/LMS: • Carr, M. (1997). New patterns: Process and change in human geography. Nelson Thornes. • Chandna, R. C. (2016). A geography of population: Concepts, determinants and patterns. Kalyani Publishers. • De Blij, H. J. (1996). Human geography: Culture, society and space. John Wiley & Sons. • Fellmann, J. D. (1997). Human geography: Landscapes of human activities. Brown & Benchmark Publishers. • Hassan, M. I. (2020). Population geography: A systematic exposition. Routledge. • Hazen, H. D., Alberts, H. C., & Zaniewski, K. J. (2023). Population geography: Social justice for a sustainable world. Taylor & Francis. • Hussain, M. (2018). Human geography. Rawat Publications. • Maurya, S. D. (2017). Population geography. Sharda Pustak Bhawan. • McBride, P. J. (1996). Human geography: Systems, patterns and change. Blackie Academic					

& Professional.

- Qazi, S. A. (2010). Population geography. APH Publishing Corporation.
- Roy, D. (2022). Population geography. Books & Allied Pvt. Ltd.
- Singh, Y. I. (2021). Population and settlement geography. APH Publishing Corporation.
- मौर्या, एस. डी. (2022). जनसंख्या भूगोल. शारदा पुस्तक भवन.
- ममोरिया, चतुर्भुज, & दांगी, संतोष कुमार. (2019). जनसंख्या भूगोल. साहित्य भवन पब्लिकेशन्स.

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	-	1	-	2	-	2	-	-
CLO ₂	3	-	-	1	1	-	3	2	3	1	-
CLO ₃	3	-	-	2	1	-	2	2	3	1	-
CLO ₄	2	1	-	3	1	-	3	3	3	2	2

Content Mapping with NEP thrust areas

Field	Content/s
Employability/Entrepreneurship	-
Skill Enhancement	35
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	5
Current Issues and Social Awareness	20
Women empowerment/ Gender issues	5
Public policies	5
Any Other	-

Part A-Introduction			
Name of the Programme	U. G.		
Semester	VI		
Nature of Course /Course Composition	Theory + Practical		
Name of the Course	Making of Maps		
Course Code	24L5.5-VOC-GEO- 601		
Course Type	CC-M6(V)		
Course Level	300-399		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ . Understand the fundamentals of map and scale CLO ₂ – Learn about the techniques of representation the data of physical elements. CLO ₃ - Learn about the techniques of representation Socio-economic data CLO ₄ – develop the skill to represent various data.		
	Theory	Practical	Total
Credits	3	1	4
Teaching hours per week	3	2	5
Internal Assessment Marks	25	05	30
End Term Exam Marks	50	20	70
Max. Marks	75	25	100
Examination Duration (in Hours)	3	2	
Part – B -Contents of the Course			
<u>Instructions for Theory Paper - Setter</u>			
The paper setter shall prepare 7 questions selecting two questions from each of the three units with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question comprising 4 short answer type questions carrying two marks each (total 08 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt four questions: the compulsory question no. 1 and 1 question from the each of the three units.			
<u>Instructions for Practical Examiner</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 10.			
Unit	Topics	CLO/s Attempt	Contact Hours
Unit-I	Maps: Definition, development, significance and classification. Basics of topographical maps and Open Series Maps. Fundamental aspects of maps, Scale (definition, and types Conversion of scale)	CLO ₁	15
Unit-II	Relief map and diagram: depiction of relief, slope, and gradient, profile, methods of slop analysis (e.g. Wentworth,	CLO ₂	15

	smith) and altimetry frequency curve and hypsometric analysis Methods to represent Climatic data (temperature, rainfall, humidity, wind direction etc.), Symbols in daily weather report used by Indian meteorological department (IMD) and isobaric pattern.				
Unit-III	Methods to representation of Socio Economic data (dot map, proportional squares, circles spheres, choropleth map, star and scatter diagrams, Ergograph, flow line diagrams)	CLO ₃	15		
Practical	Practical Record: A project file consisting of 8 exercises on the below mentioned themes: - Representation of various maps and diagrams: • Draw map of Haryana using all conventional symbols (1) • Construction of wind rose diagram (1) • Construction of line and bar graph to show the temperature and rainfall (2) • Simple & multiple dot method maps (2) • Draw cultural and physical features using toposheet (2)	CLO ₄	30		
	Contact Hours	75			
Evaluation Methods					
Internal Assessment: 30	TH-25	PR-5	End Term Examination: 70	TH-50	PR-20
Class Participation:	5	0	Lab record	NA	05
Seminar/presentation/assignment/quiz/class test etc.:	5	NA	Viva-Voce	NA	05
Seminar/Demonstration/Viva-voce/Lab records etc.:	NA	05	Written Examination	50	NA
Mid-Term Exam:	15	NA	Write-up and execution of the practical	NA	10
Part – C -Learning Resources					
Recommended Books/e-resources/LMS:					
• Dent, B. D. (1999). Cartography: Thematic map design (Vol. 1). Tata McGraw-Hill. • Gupta, K. K., & Tyagi, V. C. (1992). Working with maps. Survey of India, Department of Science and Technology. • Mishra, R. P., & Ramesh, A. (1989). Fundamentals of cartography. Concept Publishing Company. • Monkhouse, F. J., & Wilkinson, H. R. (1971). Maps and diagrams. Methuen. • Singh, R. L. (2005). Elements of practical geography. Kalyani Publishers. • Ramamurthy, K. (1982). Map interpretation. Rex Printers. • Robinson, A. H. (1953). Elements of cartography. John Wiley & Sons. • Singh, G. (2005). Map work and practical geography. Vikas Publishing House. • Siddhartha, K. (2006). Geography through maps. Kisalaya Publications. • Steers, J. A. (1970). An introduction to the study of map projections. University of London Press. • मिश्रा, आर. एन., & शर्मा, पी. के. (2019). <i>प्रायोगिक भूगोल</i>. रावत पब्लिकेशन. • श्रीवास्तव, लोकेश. (2023). <i>प्रयोगात्मक भूगोल</i>. शारदा पुस्तक भवन.					

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	-	1	-	1	2	2	3	2
CLO ₂	3	-	-	1	1	-	2	2	3	3	2
CLO ₃	3	-	-	2	1	-	2	3	3	3	2
CLO ₄	3	1	-	2	1	-	3	3	3	3	3

Content Mapping with NEP thrust areas

Field	Content/s
Employability/Entrepreneurship	-
Skill Enhancement	60
Communication Development	-
Indian Knowledge System	5
Environmental Awareness	5
Current Issues and Social Awareness	5
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A-Introduction			
Name of Programme	U. G.		
Semester	VII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Geography and Climate		
Course Code	24L6.0-GEO- 701		
Course Type	CC-H1/CC-HMI		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ - enhance the knowledge about atmospheric constituents and structure. CLO ₂ – develop the scientific understanding about climatic elements and their characteristics. CLO ₃ - sharpen the understanding about atmospheric moisture, stability, instability and weather system. CLO ₄ – enrich the knowledge about climatic classification, climate change and global warming.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B – Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Definition of weather and climate; climatology and meteorology. Origin, composition and structure of atmosphere. Solar radiation, greenhouse effect, heat budget and temperature distribution.	CLO ₁	15
II	Atmospheric pressure and its distribution pattern. Theories of general circulation and planetary winds. Walker circulation- ENSO and La Nina, origin of monsoons and jet streams.	CLO ₂	15
III	Atmospheric moisture: humidity, evaporation, condensation: precipitation formation theories and types of precipitation, acid rain.	CLO ₃	15

	Stability and instability of atmosphere, air masses and fronts. Weather systems: origin and characteristics of extra tropical and tropical cyclones.		
IV	Climatic classification: bases of climatic classification by Koppen, Trewartha and Thornthwaite. Climate change: pattern, evidences and theories. Global warming: theories and impacts on earth systems.	CLO ₄	15
	Total Contact hours	60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part - C- Learning Resources			
Recommended Books/e-resources/LMS:			
- Ahrens, C. D. (1994). <i>Meteorology Today: An Introduction to Weather, Climate and Environment</i>. Minnesota, USA: West Publishing Company. - Barry, R. G., & Chorley, R. J. (2010). <i>Atmosphere, Weather and Climate</i>. Harlow: Pearson Education Limited. - Collins, J. M. (2014). <i>Climatology</i>. Oxford: Oxford University Press. - Critchfield, H. J. (1987). <i>General Climatology</i>. New Delhi: Prentice Hall of India. - Das, P. K. (1984). <i>The Monsoons</i>. New Delhi: National Book Trust. - Lal, D. S. (1966). <i>Climatology</i>. Allahabad: Chaitanya Publishing House. - Lutgens, F. K., & Tarbuck, E. J. (2010). <i>The Atmosphere: An Introduction to Meteorology</i>. New Delhi: Prentice Hall of India. - Oliver, J. E., & Hidore, J. J. (2003). <i>Climatology: An Atmospheric Science</i>. New Delhi: Pearson Education. - Rama Sastry, A. A. (1984). <i>Weather and Weather Forecasting</i>. New Delhi: Publication Division, Government of India. - Trewartha, G. T. (1980). <i>An Introduction to Climate</i>. New York: McGraw-Hill Book Company. - मौर्य, एस. डी. (2020). <i>विश्व का प्रादेशिक भूगोल</i>. प्रयागराज: प्रवालिका पब्लिकेशन। - त्रिवेदी, आर. के. (2014). <i>पर्यावरण और पारिस्थितिकी</i>. आगरा: लक्ष्मी नारायण अग्रवाल।			

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	1	1	-	2	1	2	1	-
CLO ₂	3	-	-	2	1	-	3	2	3	2	1
CLO ₃	3	-	-	2	1	-	3	3	3	2	2
CLO ₄	3	-	-	3	1	-	3	3	3	2	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	10
Communication Development	-
Indian Knowledge System	5
Environmental Awareness	15
Current Issues and Social Awareness	15
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A-Introduction			
Name of Programme	U. G.		
Semester	VII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Landforms: Processes, Structure and Origin		
Course Code	24L6.0-GEO-702		
Course Type	CC-H2		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ - Understand the concepts and development of landforms. CLO ₂ - Understand internal and external geomorphic processes. CLO ₃ - Understand fluvial, glacial, aeolian, coastal and karst landforms. CLO ₄ - Understand the role of landforms in environmental management and development.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B-Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Landforms- order and development of landforms, fundamental concepts in geomorphology. Theories relate to the development of landforms; Convection current theory, sea floor spreading, paleo magnetism, continental drift and plate tectonic.	CLO ₁	15
II	Landforms development and geomorphic processes- internal and external processes. Earthquakes and volcanic activities, weathering and mass wasting and erosion-factors and types.	CLO ₂	15
III	Fluvial, glacial, Aeolian, waves and karst: nature, processes and	CLO ₃	15

	resulting landforms. Slope processes: hill slopes, pediments and gullies, theories of slope development.		
IV	Environmental conditions and landforms development, role of landforms in environmental management. Significance of landforms in groundwater management, construction of large dams, transport infrastructure, and urban development.	CLO ₄	15
	Total Contact hours	60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part C-Learning Resources			
Recommended Books/e-resources/LMS:			
• Bloom, A. L. (2004). <i>Geomorphology: A Systematic Analysis of Late Cenozoic Landforms</i>. Long Grove, IL: Waveland Press. • Cooke, R. U., & Doornkamp, J. C. (1990). <i>Geomorphology in Environmental Management: A New Introduction</i>. Oxford: Clarendon Press. • Critchfield, H. J. (1987). <i>General Climatology</i>. New Delhi: Prentice Hall India Learning Pvt. Ltd. • Embleton, C., & Thornes, J. B. (1979). <i>Processes in Geomorphology</i>. London: Edward Arnold. • Goudie, A. (1984). <i>The Nature of the Environment: An Advanced Physical Geography</i>. Oxford: Basil Blackwell. • Kale, V. S., & Gupta, A. (2001). <i>Introduction to Geomorphology</i>. Hyderabad: Orient Longman. • Monkhouse, F. J. (2009). <i>Principles of Physical Geography</i>. Kolkata: Platinum Publishers. • Pickering, K. T., & Owen, L. A. (1997). <i>An Introduction to Global Environmental Issues</i>. London: Routledge. • Sharma, H. S., & Kale, V. S. (2009). <i>Geomorphology in India</i>. Allahabad: Prayag Pustak Bhawan. • Sharma, V. K. (2010). <i>Introduction to Process Geomorphology</i>. London: Taylor & Francis. • Singh, S. (2002). <i>Geomorphology</i>. Allahabad: Prayag Pustak Bhawan. • Strahler, A. H. (2013). <i>Introducing Physical Geography</i>. New York: John Wiley & Sons. • Strahler, A. H., & Strahler, A. N. (2008). <i>Modern Physical Geography</i>. New York: John Wiley & Sons. • Strahler, A. H., & Strahler, A. N. (2002). <i>Physical Geography: Science and Systems of the Human Environment</i>. New York: John Wiley & Sons. • Summerfield, M. A. (2013). <i>Global Geomorphology: An Introduction to the Study of Landforms</i>. London: Routledge.			

- Thornbury, W. D. (2004). *Principles of Geomorphology*. New York: John Wiley & Sons.
- प्रसाद, गायत्री. (2024). *भू-आकृतिविज्ञान*. इलाहाबाद: शारदा पुस्तक भवन।
- सिंह, सविन्द्र. (2024). *भू-आकृतिविज्ञान*. प्रयागराज: प्रवालिका पब्लिकेशन।

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	-	-	-	1	-	2	1	2	1	-
CLO ₂	3	-	-	1	1	-	3	2	3	1	1
CLO ₃	3	-	-	2	1	-	3	3	3	2	2
CLO ₄	3	-	-	3	1	-	3	3	3	2	3

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	-
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	25
Current Issues and Social Awareness	10
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A-Introduction			
Name of Programme	U. G.		
Semester	VII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Geography and World Economies		
Course Code	24L6.0-GEO-703		
Course Type	CC-H3		
Course Level	400-499		
Pre-requisite for the course (if any)	N.A		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ – Analyze the relationship between geography and world economies. CLO ₂ – Learn the stages of economic development and compare developed and developing world economies. CLO ₃ – Aware the role of transport and location theories in the spatial organization of economic activities. CLO ₄ - Assess the role of regional trade blocs and global trade institutions in the world economy.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B- Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topic Contact Hours & CLOs Attempt		
I	Geographical approach to economy: space, place and scale. Changing geographical conditions and its impact on world economics. Concepts in economic geography: economic man, goods and services, production, exchange and consumption; consumption process: significance of consumption in economy.	CLO ₁	15
II	Economic development: meaning, evolution, goals, measures, patterns, problems and stages of economic development (classical and contemporary: Rostow's, Romer's models). World economies: bases of classification, patterns and characteristics of developed and developing economies of the world.	CLO ₂	15

III	Network structure and economic activities, impact of transport on economic activities, spatial variation in production and transport cost. Location theories of Weber, Lösch, Christaller and Ullman	CLO ₃	15
IV	Globalization and recent trends of international trade, Major trade conflicts in the world and solutions. Major regional trade blocks of the world; GATT, WTO, EU TRIPS and OPEC: Functions and relevance.	CLO ₄	15
	Total Contact hours	60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part - C-Learning Resources			
Recommended Books/e-resources/LMS:			
1. Aoyama, Y., Murphy, J. T., & Hanson, S. (2010). Key Concepts in Economic Geography. London: Sage Publications.			
2. Bagchi-Sen, S., & Smith, H. L. (2006). Economic Geography: Past, Present and Future. London: Taylor & Francis.			
3. Barnes, T., Peck, J., Sheppard, E., & Tickell, A. (Eds.). (2003). Reading Economic Geography. Oxford: Wiley-Blackwell.			
4. Coe, N., Kelly, P., & Yeung, H. W. C. (2007). Economic Geography: A Contemporary Introduction. Oxford: Blackwell Publishing.			
5. Gautam, A. (2010). Advanced Economic Geography. Allahabad: Sharda Pustak Bhawan.			
6. Hudson, R. (2005). Economic Geographies: Circuits, Flows and Spaces. London: Sage Publications.			
7. Karlsson, C., Andersson, M., & Norman, T. (2016). Handbook of Research Methods and Applications in Economic Geography. Cheltenham, UK: Edward Elgar Publishing.			
8. Saxena, H. M. (2013). Economic Geography. Jaipur: Rawat Publications.			
9. Wood, A., & Roberts, S. M. (2010). Economic Geography: Places, Networks and Flows. London: Routledge.			
10. गौतम, अल्का. (2023). <i>आर्थिक भूगोल के मूल तत्व</i> . इलाहाबाद: शारदा पब्लिकेशन।			
11. ममोरिया, चतुर्भुज, एवं सिसोदिया, एम. एस. (2025). <i>मानव एवं आर्थिक भूगोल</i> . आगरा: एस.बी.पी.डी. पब्लिकेशन।			

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	2	1	2	-	-	2	-	-	-	1
CLO ₂	3	3	2	2	-	-	2	-	-	-	2
CLO ₃	3	3	2	3	-	-	2	-	-	-	2
CLO ₄	3	2	2	2	-	-	3	-	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	-
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	5
Current Issues and Social Awareness	5
Women empowerment/ Gender issues	-
Public policies	5
Any Other	-

Part A – Introduction			
Name of Programme	U. G.		
Semester	VII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Geography of Asia		
Course Code	24L6.0-GEO-704		
Course Type	DSE-6		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ - Awareness about physiographic structure of Asia. CLO ₂ - Knowledge about the characteristics of people of Asia. CLO ₃ – know the distribution pattern Agriculture and minerals CLO ₄ - Acquaintance with the economic activities in Asia.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B- Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Asia-physiographic characteristics, climate, natural vegetation and major river systems. Southeast Asia: colonial, modern economics, and strategic significance	CLO ₁	15
II	Demographic attributes: population distribution, density, growth and urbanization. Socio-cultural attributes: languages, religions and races.	CLO ₂	15
III	Agriculture: area, production and yield of wheat, rice, sugarcane, cotton, tea, coffee and rubber. Minerals distribution and production: iron-ore, manganese, mica, coal and petroleum.	CLO ₃	15

IV	Major industries and trade: textile, iron and steel, petro-chemicals, automobiles and electronics. Economic activities and regional development of Asia.	CLO ₄	15
	Total Contact hours	60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part C-Learning Resources			
Recommended Books/e-resources/LMS:			
- Bailly, H. J., & Muller, P. O. (2007). <i>The World Today: Concepts and Regions in Geography</i>. New York: John Wiley & Sons. - Bradshaw, M., Dymond, J., Carney, G. F., Schug, M. C., & Bradshaw, M. M. (2011). <i>Contemporary World Regional Geography: Global Connections, Local Voices</i>. New York: McGraw-Hill Education. - Farmer, B. H. (1993). <i>An Introduction to South Asia</i>. London: Routledge. - Hussain, M. (2012). <i>World Geography</i>. Jaipur: Rawat Publications. - Memoria, C., & Aggarwal, M. L. (2018). <i>Geography of Asia</i>. New Delhi: Sahitya Bhawan Publications. - Nizamuddin, & Minhajul, H. M. B. (2008). <i>Textbook of General Geography of Asia</i>. New Delhi: Kalyani Publishers. - Sharma, Y. K. (2019). <i>Geography of Asia</i>. New Delhi: Lakshmi Narain Agarwal Publishers. - Stamp, L. D. (1952). <i>Asia: A Regional and Economic Geography</i>. London: Methuen & Co. Ltd. - Tirtha, R. (2006). <i>Geography of Asia</i>. Jaipur: Rawat Publications. - ममोरिया, चतुर्भुज. (2021). <i>एशिया का भूगोल</i>. आगरा: एसबीपीडी पब्लिकेशन।			

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	2	1	2	-	-	2	-	-	-	1
CLO ₂	3	2	2	2	-	-	3	-	-	-	2
CLO ₃	3	3	2	3	-	-	2	-	-	-	2
CLO ₄	3	3	2	3	-	-	2	-	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	-
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	8
Current Issues and Social Awareness	10
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A – Introduction			
Name of Programme	U. G.		
Semester	VII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Population Dynamics and Policies		
Course Code	24L6.0-GEO-705		
Course Type	DSE-6		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ - Understand the concepts and patterns of population dynamics. CLO ₂ - Assess population composition and its socio-economic implications. CLO ₃ - Acquire knowledge about population growth theories and population–resource relationships. CLO ₄ – Understand the Population problems and policies of developed and undeveloped countries.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B – Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Population dynamics- nature, scope and significance. Sources, quality, reliability and applications of population data. Problems of mapping population data. Concepts, measurements, determinants, and global patterns of fertility, mortality, migration (including policies) and growth.	CLO ₁	15
II	Composition of population: concepts, measurements, determinants, and world patterns of age and sex, occupational structure and workforce.	CLO ₂	15

	Demographic dividend: linkages between population and economic development, population and environment.		
III	Theory of population growth: Malthus, views of Marx and Ricardo, demographic transition model. Population resource relations: concepts of over population, under population and optimum population; population resource regions. Limits to growth: concept and application.	CLO ₃	15
IV	Population problems and policies of developed and less developed countries: (a) Developed world: U.S.A., Australia, and Canada. (b) Less developed world: India, China and Brazil. Population problems and environmental implications.	CLO ₄	15
	Total Contact hours		60
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part C- Learning Resources			
Recommended Books/e-resources/LMS:			
• Bhende, A. A., & Kanitkar, T. (2011). <i>Principles of Population Studies</i>. Mumbai: Himalaya Publishing House. • Cassen, R., & Bates, L. M. (1994). <i>Population Policy: A New Consensus</i>. Washington, D.C.: Overseas Development Council. • Chandna, R. C. (2016). <i>Population Geography: Concepts, Determinants and Patterns</i>. New Delhi: Kalyani Publishers. • Graff, M., & Bremner, J. (2014). <i>A Practical Guide to Population and Development</i>. Washington, D.C.: Population Reference Bureau. • Hassan, M. I. (2020). <i>Population Geography: A Systematic Exposition</i>. London: Routledge. • Mahajan, N. (2014). <i>Population Geography</i>. Delhi: R. K. Publishers. • May, J. F. (2012). <i>World Population Policies: Their Origin, Evolution, and Impact</i>. Dordrecht: Springer. • Murray, C. J. L., Salomon, J. A., Mathers, C. D., & Lopez, A. D. (2002). <i>Summary Measures of Population Health: Concepts, Ethics, Measurement and Applications</i>. Geneva: World Health Organization (WHO). • Qazi, S. A. (2010). <i>Population Geography</i>. New Delhi: APH Publishing Corporation. • United Nations. (1997). <i>Health and Mortality Issues of Global Concern: Proceedings of the Symposium on Health and Mortality, Brussels, 19–22 November 1997</i>. New York:			

United Nations.

- Woods, R. (1979). *Population Analysis in Geography*. London: Longman.
- हुसैन, माजिद. (2012). *मानव भूगोल*. जयपुर: रावत पब्लिकेशन।

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	2	2	2	2	-	-	-	-	-	1
CLO ₂	3	3	3	2	2	-	2	-	-	-	1
CLO ₃	3	3	2	2	-	-	2	-	-	-	2
CLO ₄	3	3	3	2	-	2	3	1	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	5
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	4
Current Issues and Social Awareness	4
Women empowerment/ Gender issues	4
Public policies	5
Any Other	-

Part A-Introduction			
Name of Programme	U. G.		
Semester	VII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Advanced Cartography		
Course Code	24L6.0-GEO-706		
Course Type	PC-H1		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ - Understand the fundamentals of cartographic techniques. CLO ₂ – Learn the basics of geodesy and coordinate systems. CLO ₃ - Understand the concepts, types, and applications of map projections. CLO ₄ - Acquire knowledge of modern cartographic techniques.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B- Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Cartography-nature, scope, and development, significance of computer added cartography and software. Fundamentals of Map direction & scale; Construction of different types of scales	CLO ₁	15
II	Details of Datum, Geodetics and Spheroid Basic assumptions, Coordinate System: Polar and Cartesian, Geodesy and Geodetic methods, datum types and elements.	CLO ₂	15
III	Concept of Map Projections -Conic projection, Cylindrical projection, Zenithal Projection; Comparison between these	CLO ₃	15

	projection, Choosing a Map Projection Mercator, Transverse Mercator, Polyconic, Lambert, Orthographic and UTM		
IV	Map Preparation Techniques: Cartographic design issues, Map design process and compilation. Generalization, Symbolization, Multivariate and dynamic mapping, Modern techniques in Cartography	CLO ₄	15
	Total Contact hours	60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/class test etc.:	10		
• Mid-Term Exam:	15		
Part C- Learning Resources			
Recommended Books/e-resources/LMS:			
• Misra, R. P. (2014). <i>Fundamentals of Cartography</i>. New Delhi: Concept Publishing Company. • Monkhouse, F. J., & Wilkinson, H. R. (1973). <i>Maps and Diagrams</i>. London: Methuen & Co. Ltd. • Robinson, A. H. (2009). <i>Elements of Cartography</i>. New York: John Wiley & Sons. • Sarkar, A. (2015). <i>Practical Geography: A Systematic Approach</i>. New Delhi: Orient Black Swan Private Limited. • Sharma, J. P. (2010). <i>Prayogic Bhugol</i> (Hindi). Meerut: Rastogi Publishers. • मिश्रा, आर. एन., एवं शर्मा, पी. के. (2019). <i>प्रायोगिक भूगोल</i>. जयपुर: रावत पब्लिकेशन। • शर्मा, जे. पी. (2010). <i>प्रायोगिक भूगोल</i>. मेरठ: रस्तोगी पब्लिशर्स।			

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	3	2	2	2	-	1	-	-	-	2
CLO ₂	3	3	3	2	2	-	1	-	-	-	2
CLO ₃	3	3	3	3	2	-	2	-	-	-	2
CLO ₄	3	3	3	3	3	2	2	1	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	5
Skill Enhancement	12
Communication Development	8
Indian Knowledge System	-
Environmental Awareness	-
Current Issues and Social Awareness	-
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A-Introduction			
Name of Programme	U. G.		
Semester	VIII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Geography in Hazard Management		
Course Code	24L6.0-GEO-801		
Course Type	CC-H4/CC-HM2		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ – Understand the concept of hazard and disaster. CLO ₂ – Learn about the vulnerability and risk. CLO ₃ – Aware about Desertification, Sea level change and Technological hazards. CLO ₄ – Learn disaster management strategies.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B- Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Risk, hazards and Disasters: definitions, distinctions and relation with geographical conditions Hazards: classification and dimensions. Disaster effects and impacts (physical and social).	CLO ₁	15
II	Disaster vulnerability: definition, types, measures and affecting factors. Disaster risk assessment and management. Disaster cycles: mitigation measures and preparedness.	CLO ₂	15
III	Desertification: causes, assessment, effects and control measures. Sea level change: causes, consequences, projections and control measures. Technological hazards: nature, theories and practice, perception, mitigation, protection and adaptation.	CLO ₃	15
IV	Disaster risk reduction framework: Hyogo and Sendai.	CLO ₄	15

	Disaster management in India: strategies, policies and organizational structure setup. Geospatial technology applications in disaster prevention and monitoring.		
	Total Contact hours	60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part – C: Learning Resources			
Recommended Books/e-resources/LMS:			
• Carter, N. W. (1991). Disaster Management: A Disaster Manager's Handbook. Manila: Asian Development Bank (ADB). • Cutter, S. L. (2006). Hazards, Vulnerability and Environmental Justice. London: Routledge. • Gupta, H. K. (2013). Disaster Management. New Delhi: Universities Press. • Husky, T. (2012). Encyclopedia of the Hazardous Earth. New Delhi: Viva Books. • Kapur, A. (2010). Vulnerable India: A Geographical Study of Disasters. New Delhi: Sage Publications. • Modh, S. (2010). Managing Natural Disasters: Hydrological, Marine and Geological Disasters. New Delhi: Macmillan India Ltd. • Ministry of Home Affairs, Government of India. (2009). National Policy on Disaster Management. New Delhi: Government of India. • Pine, J. C. (2014). Hazards Analysis: Reducing the Impact of Disasters. Boca Raton: CRC Press. • Singh, R. B. (2006). Natural Hazards and Disaster Management: Vulnerability and Mitigation. New Delhi: Rawat Publications. • Singh, S., & Singh, J. (2013). Disaster Management. Allahabad: Pravalika Publications. • Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future. New Delhi: New United Press. • Smith, K. (1996). Environmental Hazards: Assessing Risks and Reducing Disasters. London: Routledge. • Stoltman, J. P. (2004). International Perspectives on Natural Disasters. Dordrecht: Kluwer Academic Publishers. • पाठक, गणेश कुमार. (2021). आपदा प्रबंधन. जयपुर: राजेश पब्लिकेशन्स। • सिंह, सविन्द्र. (2022). आपदा प्रबंधन. प्रयागराज: प्रवालिका पब्लिकेशन्स।			

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	2	2	2	1	-	2	-	-	-	1
CLO ₂	3	3	2	3	2	-	2	-	-	-	2
CLO ₃	3	3	2	2	2	1	3	-	-	-	2
CLO ₄	3	3	3	3	3	2	3	1	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	-
Communication Development	-
Indian Knowledge System	5
Environmental Awareness	8
Current Issues and Social Awareness	5
Women empowerment/ Gender issues	-
Public policies	5
Any Other	-

Part A-Introduction			
Name of Programme	U. G.		
Semester	VIII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Research Methodology in Geography		
Course Code	24L6.0-GEO-802		
Course Type	CC-H5		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ -Understand the basics of Research methodology and Research Design. CLO ₂ – Learn about the sources of data and sampling CLO ₃ - Aware about Hypothesis and Review of Literature. CLO ₄ - Develop ability and skills data collection and presentation.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B – Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Introduction to research methodology: meaning and objectives of research, characteristics of research, types of research, research gap. Introduction of research design: steps, purpose and characteristics of design: problems and formulation of research design in geography.	CLO ₁	15
II	Sources of data: characteristics of primary and secondary data, quantitative and qualitative data, Significance of field work in geographical studies. Sampling- meaning and types, parameters of design for collection of primary data	CLO ₂	15
III	Hypothesis: meaning, characteristic importance and formulation; Testing of Hypothesis parametric (standard) and non-parametric. Review of literature- types and significance, significance of reference and bibliography	CLO ₃	15

IV	Field survey: meaning, objectives and significance in geographical research; planning and organization of field surveys. Methods of data collection- observation, questionnaire, schedule and interview methods.	CLO ₄	15
	Total Contact hours	60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part C-Learning Resources			
Recommended Books/e-resources/LMS: - Ahuja, R. (2001). Research methods. Rawat Publications. - Bhatt, H. P., & Bansal, S. C. (2012). Research methodology (Hindi). Meenakshi Prakashan. - Bhattacharya, D. K. (2005). Research methodology. Excel Books. - Blaxter, L., Hughes, C., & Tight, M. (1996). How to research. Open University Press. - Cao, X., & Henderson, E. F. (2021). Exploring diary methods in higher education research: Opportunities, choices and challenges. Routledge. - Denzin, N. K., & Lincoln, Y. S. (Eds.). (2000). Handbook of qualitative research (2nd ed.). Sage Publications. - Dorling, D., & Simpson, L. (Eds.). (1999). Statistics in society. Edward Arnold. - Eyles, J., & Smith, D. M. (1988). Qualitative methods in human geography. Polity Press. - Flowerdew, R., & Martin, D. (Eds.). (1997). Methods in human geography: A guide for students doing a research project. Longman. - Gomez, B., & Jones, J. P. III. (2010). Research methods in geography: A critical introduction. Wiley-Blackwell. - Har Prasad. (n.d.). Research methodology and techniques in geography. Rawat Publications. - Hay, I. (Ed.). (2000). Qualitative research methods in human geography. Oxford University Press. - Henn, M., Weinstein, M., & Foard, N. (2006). A short introduction to social research. Vistaar Publications. - Kitchin, R., & Tate, N. J. (2001). Conducting research in human geography: Theory, methodology and practice. Prentice Hall. - Kothari, C. R., & Garg, G. (2019). Research methodology: Methods and techniques (4th ed.). New Age International Publishers. - Misra, H. N., & Singh, V. P. (1998). Research methodology: Social, spatial and policy dimensions. Rawat Publications. - मिश्रा, आर. एन., एवं शर्मा, पी. के. (2021). <i>प्रायोगिक भूगोल</i>. जयपुर: रावत पब्लिकेशन। - शर्मा, वीरेन्द्र प्रकाश. (2021). <i>रिसर्च मेथडोलॉजी</i>. जयपुर: पंचशील प्रकाशन।			

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	2	2	2	2	-	2	-	-	-	1
CLO ₂	3	3	3	3	2	-	2	-	-	-	2
CLO ₃	3	3	3	3	2	1	2	1	-	-	2
CLO ₄	3	3	3	3	3	2	2	2	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	10
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	5
Current Issues and Social Awareness	15
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A-Introduction			
Name of Programme	U. G.		
Semester	VIII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Geography of Agriculture and Food Security		
Course Code	24L6.0-GEO-803		
Course Type	CC-H6		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO₁ - Gain knowledge about the concepts of agriculture geography and its origin, determinants and approaches. CLO₂ – Enhance the knowledge of agriculture concepts and land capability classification. CLO₃ - Understand the agricultural regionalization, agro climatic regions and its major revolutions in India. CLO₄ - Familiarize with the problems, prospects and its policies of Indian agriculture.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B – Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Origin and dispersal of agriculture; determinants of agricultural patterns: physical, technological and cultural factors. Approaches to the study of agricultural geography-regional and systematic approach, ecological and commodity approach.	CLO ₁	15
II	Land capability; significance and classification, land use survey and classification, Von Thünen model of agricultural land use. Concepts of crop intensity, crop commercialization, crop diversification and concentration, crop combination;	CLO ₂	15

III	Agricultural regionalization: concept and criteria; Whittlesey's agricultural systems; measurement of agricultural efficiency and productivity. Agro-climatic zonation: concept and Indian experiences.	CLO ₃	15
IV	Perspectives in agriculture: urban agriculture, contract farming, agriculture business, sustainable agricultural development; agriculture and climate change: impacts and adaptation. Neo-liberalization and Indian agriculture; problems of Indian agriculture; food security in India, Indian agricultural policies and challenges.	CLO ₄	15
Total Contact hours		60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part C – Learning Resources			
Recommended Books/e-resources/LMS:			
• Bowler, I. R. (2014). The Geography of Agriculture in Developed Market Economies. London: Routledge. • Ferroni, M. (2012). Transforming Indian Agriculture: India 2040—Productivity, Markets and Institutions. New Delhi: Sage Publications. • Gregor, H. F. (1970). Geography of Agriculture: Themes in Research. Englewood Cliffs, NJ: Prentice-Hall. • Grigg, D. (1995). An Introduction to Agricultural Geography. London: Routledge. • Husain, M. (1996). Systematic Agricultural Geography. Jaipur: Rawat Publications. • Mohammad, N. (1992). New Dimensions in Agricultural Geography (Vols. I–VIII). New Delhi: Concept Publishing Company. • Mohammad, N., & Rai, S. C. (2014). Agricultural Diversification and Food Security in the Mountain Ecosystem. New Delhi: Concept Publishing Company. • Röling, N. G., & Wagemakers, M. A. E. (Eds.). (2000). Facilitating Sustainable Agriculture: Participatory Learning and Adaptive Management in Times of Environmental Uncertainty. Cambridge: Cambridge University Press. • Shafi, M. (2006). Agricultural Geography. New Delhi: Pearson Education. • Singh, J., & Dhillon, S. S. (1994). Agricultural Geography. New Delhi: Tata McGraw-Hill Publishing Company Ltd. • White, P. (2007). Emergence of Agriculture: A Global View. London: Routledge. • Wright, J. (2012). Sustainable Agriculture and Food Security in an Era of Oil Scarcity: Lessons from Cuba. London: Routledge. • Young, A. (1998). Land Resources: Now and for the Future. Cambridge: Cambridge University Press.			

- हुसैन, माजिद. (2000). *कृषि भूगोल*. जयपुर: रावत पब्लिकेशन।
- यादव, चन्द्रशेखर. (2025). *कृषि भूगोल*. दिल्ली: विश्वभारती पब्लिकेशन्स।

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	2	2	2	1	-	2	-	-	-	1
CLO ₂	3	3	3	2	2	-	2	-	-	-	2
CLO ₃	3	3	2	3	2	1	3	-	-	-	2
CLO ₄	3	3	3	3	2	2	3	1	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	4
Communication Development	-
Indian Knowledge System	8
Environmental Awareness	10
Current Issues and Social Awareness	5
Women empowerment/ Gender issues	-
Public policies	5
Any Other	-

Part A-Introduction			
Name of Programme	U. G.		
Semester	VIII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Geography of Europe		
Course Code	24L6.0-GEO-804		
Course Type	DSE-7		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ - Aware about physiographic structure and demographic characteristics of Europe. CLO ₂ - Know the Socio-cultural and economic attributes of Europe. CLO ₃ - Acquaintance with distribution Minerals and Industries in Europe. CLO ₄ – Understand economic activities and trade in Europe.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B – Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Physical features: relief, physiographic regions, climate, drainage, and natural vegetation. Demographic characteristics: population distribution, density and growth.	CLO ₁	15
II	Socio-cultural attributes: languages, ethnic groups and migrant groups. Economic activities with special reference to agriculture, forestry and fisheries in Europe	CLO ₂	15
III	Minerals and distribution, Industrialization and development, Major industries (textile, automobiles and electronics) and industrial regions.	CLO ₃	15

IV	Economic activities and regional development of Europe. International trade, transport and communication, Geopolitics of European Union.	CLO ₄	15
	Total Contact hours	60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part C – Learning Resources			
Recommended Books/e-resources/LMS:			
• Blouet, B. W. (2007). The EU and Its Neighbours: A Geography of Europe in the Modern World. Hoboken, NJ: John Wiley & Sons. • Bradshaw, M., Dymond, J., Carney, G. F., Schug, M. C., & Bradshaw, M. M. (2011). Contemporary World Regional Geography: Global Connections, Local Voices. New York: McGraw-Hill. • De Blij, H. J., & Muller, P. O. (2007). The World Today: Concepts and Regions in Geography. New York: John Wiley & Sons. • Gottmann, J. (1969). Geography of Europe. New York: Holt, Rinehart and Winston. • Hussain, M. (2012). World Geography. Jaipur: Rawat Publications. • Koster, A. E. (2005). A Physical Geography of Western Europe (Oxford Regional Environments Series). Oxford: Oxford University Press. • Mutabdzija, G. (2018). Regional Geography of Europe: From Geographical to Innovative Regions. East Sarajevo: University of East Sarajevo. • Smith, T. A. (1913). Geography of Europe. New York: Macmillan. • दयाल, पी. (2025). यूरोप का भूगोल. जयपुर: राजेश पब्लिकेशन।			

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	2	2	2	1	-	2	-	-	-	1
CLO ₂	3	3	2	2	2	-	2	-	-	-	2
CLO ₃	3	3	3	3	2	-	2	-	-	-	2
CLO ₄	3	3	3	3	2	2	3	1	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	-
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	10
Current Issues and Social Awareness	8
Women empowerment/ Gender issues	-
Public policies	3
Any Other	-

Part A-Introduction			
Name of Programme	U. G.		
Semester	VIII		
Nature of Course/Course Composition	Theory (Theory + Tutorial)		
Name of the Course	Geography and Watershed Management		
Course Code	24L6.0-GEO-805		
Course Type	DSE-7		
Course Level	400-499		
Pre-requisite for the course (if any)	N. A.		
Course Learning Outcomes (CLOs ₁) After completing this course, the learner will be able to:	CLO ₁ - Understand basics of watershed and its aspects. CLO ₂ - Learn water conservation and soil erosion control. CLO ₃ – Aware about watershed development plans. CLO ₄ – Study the watershed management programmes.		
	Theory	Practical	Total
Credits	4	0	4
Teaching Hours per week	4	0	4
Internal Assessment Marks	30	0	30
End Term Exam Marks	70	0	70
Max. Marks	100	0	100
Examination Duration (in Hours)	03		
Part B – Contents of the Course			
<u>Instructions for Paper- Setter:</u>			
The paper setter shall prepare 9 questions selecting two questions from each unit with consideration given to the Course Learning Outcomes. Among these, question number 1 will be compulsory question, comprising 7 short answer type questions carrying two marks each (total 14 marks) and covering the entire syllabus. The remaining questions will be carrying 14 marks each. Examinees will be required to attempt five questions: the compulsory question no. 1 and 1 question from the each of the four units.			
Unit	Topics	CLOs Attempt	Contact Hours
I	Concept and demarcation of watersheds, their utility as units of hydrological and environmental aspects of a watershed. Linear, areal and relief properties of watershed, Significance of watershed for land use planning and management.	CLO ₁	15
II	Water conservation through watershed management: Micro-catchment water harvesting, evaporation suppression and seepage reduction. Supplemental irrigation, groundwater recharge, afforestation. Management of soil erosion: Overland flow and gullies.	CLO ₂	15
III	Integrated watershed development plan for resource management, administrative arrangements and agency selection for plan implementation. Monitoring and evaluation system of watershed development.	CLO ₃	15
IV	Programmes on watershed management: Govt. of India	CLO ₄	15

	guidelines on watershed development. Watershed-based rural development and the role of NGOs in watershed management.		
	Total Contact hours	60	
Evaluation Methods			
Internal Assessment:30 Marks		End Term Examination: 70 Marks	
• Class Participation:	5	Written Examination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		
Part C-Learning Resources			
Recommended Books/e-resources/LMS:			
• Mitchell, C. W. (2014). <i>Terrain Evaluation</i>. London: Routledge. • Morgan, R. P. C. (2005). <i>Soil Erosion and Conservation</i> (3rd ed.). Oxford: Blackwell Publishing. • Murthy, V. V. N. (2005). <i>Land and Water Management Engineering</i>. New Delhi: Kalyani Publishers. • Tideman, E. M. (1996). <i>Watershed Management: Guidelines for Indian Conditions</i>. New Delhi: Omega Scientific Publishers. • Yousuf, A., & Singh, M. (2021). <i>Watershed Hydrology: Management and Modeling</i>. Boca Raton, FL: CRC Press. • गुर्जर, रामकुमार, एवं जाट, बी. सी. (2008). <i>जल संसाधन भूगोल</i>. जयपुर: रावत पब्लिकेशन। • सिंह, सुनीता. (2022). <i>जल संसाधन प्रबंधन एवं उनका विकास</i>. जयपुर: के. के. पब्लिकेशन्स।			

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	3	2	2	2	-	2	-	-	-	2
CLO ₂	3	3	3	3	3	2	3	1	-	-	2
CLO ₃	3	3	3	3	2	2	3	2	-	-	2
CLO ₄	3	3	2	2	2	3	3	2	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	8

Communication Development	-
Indian Knowledge System	-
Environmental Awareness	10
Current Issues and Social Awareness	5
Women empowerment/ Gender issues	-
Public policies	5
Any Other	-

Part A–Introduction			
Name of the Programme	U. G.		
Semester	VIII		
Nature of Course/Course Composition	Practical		
Name of the Course	Morphometric Analysis and Landforms		
Course Code	24L6.0-GEO-806		
Course Type	PC-H2		
Course Level	400-499		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLOs) After completing this course, the learner will be able to:	CLO ₁ – Understand the history basic concepts and significance of morphometric analysis. CLO ₂ – develop the skill to delineate watershed and study linear aspects. CLO ₃ – represent areal and relief aspects of drainage basin. CLO ₄ – study the slope of drainage basin.		
	Theory	Practical	Total
Credits	0	4	4
Teaching hours per week	0	8	8
Internal Assessment Marks	0	30	30
End Term Exam Marks	0	70	70
Max. Marks	0	100	100
Examination Duration (in Hours)	0	03	
Part B-Contents of the Course			
<u>Instructions for Examiner:</u>			
Write-up and execution of the practical will be conducted as per the nature of the practical by the external examiner, with consideration given to the Course Learning Outcomes. The maximum marks for the write-up and execution of the practical will be 40.			
Unit	Topics	CLOs Attempt	Contact Hours
Unit-I	Morphometric Analysis- nature, scope and relation with earth sciences. Methodologies, applications, advantages and limitations of morphometric analysis	CLO ₁	30
Unit-II	Drainage mapping and morphometric analysis, Delineation of watershed, Aspects of morphometric analysis and affecting factors. Linear aspect- significance, and calculation of stream order, stream number, bifurcation ratio, stream length and length of overland flow	CLO ₂	30
Unit-III	Areal aspects—Calculation and significance of drainage area,	CLO ₃	30

	shape parameters, drainage frequency and drainage density. Relief aspects- Calculation and significance of basin relief, relative relief (G. H. Smith's method), area-height curve, altimetry frequency curve, hypsographic analysis and hypsographic integral curve.		
Unit-IV	Slope- classification of slope and factors of slope development and slope failure , calculation and significance, methods of slope analysis slope (Wentworth's method) Slope profile: significance and types, slope profile analysis (methodology and tools)	CLO ₄	30
	Contact Hours	120	
Evaluation Methods			
Internal Assessment	MM-30	End Term Examination: 70	MM- 70
Class Participation:	5	Lab record	10
Seminar / Demonstration / Viva-voce / Lab records etc.:	10	Viva-Voce	20
Mid-Term Exam:	15	Write-up and execution of the practical	40
Part - C-Learning Resources			
Recommended Books/e-resources/LMS:			
• Dury, G. H. (1966). Essays in Geomorphology. London: Heinemann. • Miller, A. A. (1964). The Skin of the Earth. London: Methuen & Co. Ltd. • Misra, R. P., & Ramesh, A. (1989). Fundamentals of Cartography. New Delhi: Concept Publishing Company. • Monkhouse, F. J., & Wilkinson, H. R. (1971). Maps and Diagrams: Their Compilation and Construction. London: Methuen & Co. Ltd. • Singh, R. L. (1986). Elements of Practical Geography. New Delhi: Kalyani Publishers. • Singh, S. (2022). Geomorphology. Prayagraj: Prayag Pustak Bhawan. • Strahler, A. H. (2013). Introducing Physical Geography. Hoboken, NJ: John Wiley & Sons. • सिंह, सविन्द्र. (2021). भू-आकृतिविज्ञान. प्रयागराज: प्रवालिका पब्लिकेशन्स। • हुसैन, माजिद. (2008). भौतिक भूगोल. जयपुर: रावत पब्लिकेशन्स।			

Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	2	2	2	1	-	2	-	-	-	1
CLO ₂	3	3	3	3	3	-	2	1	-	-	2
CLO ₃	3	3	3	3	2	1	2	1	-	-	2
CLO ₄	3	3	3	3	3	2	2	2	-	-	2

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	-
Skill Enhancement	12
Communication Development	-
Indian Knowledge System	-
Environmental Awareness	5
Current Issues and Social Awareness	8
Women empowerment/ Gender issues	-
Public policies	-
Any Other	-

Part A – Introduction	
Name of the Programme	U. G.
Semester	VIII
Nature of Course	Dissertation / Project Work
Name of the Course	Project/Dissertation
Course Code	24L6.0-GEO-807
Course Type	Project/Dissertation
Course Level	400-499
Pre-requisite for the course (if any)	N. A.
Course Outcomes (CLOs) After completing this course, the learner will be able to:	CO ₁ – Identify the research problem and formulation of research design CO ₂ - Work in real time field and laboratory situations. CO ₃ – Learn the techniques of data generation and analysis of the generated data. CO ₄ – Interpret and discuss the results of a research problem in hand. Learn the nitty-gritty of project / dissertation writing.
Total Credits	12
Max. Marks	300 (Report of dissertation- 200 marks + Open Viva Voce- 100)
Part B – Guidelines for the Dissertation Work/Project Work	
The total number of students' projects offered will be one per faculty member in accordance with the ordinance, and allotment will be made on the basis of merit cum preference of the students. Students opting for the project will be exempted from the corresponding theory course. The work can be carried out in any thrust area of _____ under the guidance of the allotted supervisor of the department. The students must submit their project report to the department as per the date announced for the submission. External assessment of the project work will be carried out by an external examiner nominated by the Vice-Chancellor from a panel approved by the Board of Studies. 1. Field Project /Research Project/Master's Dissertation will contain a cover page, a certificate signed by the student and supervisor, a table of contents, an introduction, Objectives, Literature review, methodology, results and discussion conclusion, and references. ✓ The paper size to be used should be A-4 size. ✓ The font size should be 12 with Times New Roman.	

- ✓ The text of the report may be typed in 1.5 (one and a half) space.
 - ✓ The printout of the report shall be done on both sides of the paper (instead of single-side printing)
 - ✓ The total no. of written pages should be between 80 to 100 for the report.
2. The candidate shall be required to submit two soft-bound copies of the report along with a CD/ email in the department as per the date announced. It must be submitted with a plagiarism report in accordance with the rules of the University/UGC.
 3. The candidate will defend her/his project work through presentation and viva voce examination before the External examiner at the end of the semester and will be awarded marks. The dissertation/project work will be evaluated as per university rules/policy/guidelines.
 4. In case, a student is not able to score passing marks in the research project exam, he/she will have to resubmit her/his report after making all corrections/improvements & this report shall be evaluated as above. The candidate is required to submit the corrected copy of the report in hardbound within one month after the viva -voce. In case of any confusion regarding rules and its interpretation, the rules of examination branch will be final and applicable.

FORMAT OF DISSERTATION/PROJECT WORK

- General Introduction to the Study and Theoretical Framework
- Review of Literature
- Research Gap
- Statement of the problem
- Significance of the Study
- Formulation of Research Questions /Issues
- Research objectives
- Hypotheses
- Data source (Primary/Secondary)
- Methodology
- Analysis of Data
- Discussion of the Results
- Major findings, Summary, Recommendations (if any) and Conclusion
- Bibliography /References & Webliography
- Appendices

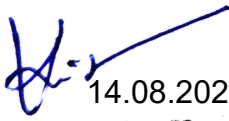
Mapping of Course Learning Outcomes (CLOs) to Program Outcomes & Program Specific Outcomes

CLOs	PO ₁	PO ₂	PO ₃	PO ₄	PO ₅	PO ₆	PO ₇	PO ₈	PO ₉	PO ₁₀	PO ₁₁
CLO ₁	3	3	3	3	2	-	2	-	-	-	2
CLO ₂	3	3	3	3	3	2	2	1	-	-	2
CLO ₃	3	3	3	3	3	2	2	2	-	-	2
CLO ₄	3	3	3	3	2	2	2	2	1	-	3

Content Mapping with NEP thrust areas

Field	Hours devoted
Employability/Entrepreneurship	As per the approved research topic and University Ordinance.
Skill Enhancement	
Communication Development	
Indian Knowledge System	
Environmental Awareness	
Current Issues and Social Awareness	
Women empowerment/ Gender issues	
Public policies	
Any Other	

Note: UG Board of Studies in Geography authorizes staff council of the department to carry minor corrections in scheme and syllabi of UG programme, if any.


 14.08.2026
Dr. Vipin Kumar
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