DEPARTMENT OF GEOGRAPHY, CHAUDHARY RANBIR SINGH UNIVERSITY, JIND
SCHEME OF EXAMINATION FOR M. Sc. IN GEOGRAPHY (NEP-2020) w.e.f. 2024-25

Semester	Course Type	Course Code	Nomenclature of course	Theory (T)/ Practical (P)	Credits		Contact hours per week L: Lecture P: Practical T: Tutorial				Internal Assessment Marks	End Term Examination Marks	Total Marks	Examination hours
						Total	L	T	P	Total				
I	CC-1	M24- GEO-101	CLIMATOLOGY	T	4	26	4	0	0	4	30	70	100	3
	CC-2	M24- GEO -102	GEOMORPHOLOGY	T	4		4	0	0	4	30	70	100	3
	CC-3	M24- GEO -103	WOLRD ECONOMIC GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
	CC-4	M24- GEO -104	GEOGRAPHY OF INDIA	T	4		4	0	0	4	30	70	100	3
	PC-1	M24- GEO -105	COMPUTER-BASED DATA MANAGEMENT IN GEOGRAPHY	P	4		0	0	8	8	30	70	100	3
	PC-2	M24- GEO - 106	QUANTITATIVE METHODS IN GEOGRAPHY	P	4		0	0	8	8	30	70	100	3
	SEM	M24- GEO - 107	SEMINAR	S	2		0	0	0	2	0	50	50	1

Semester	Course Type	Course Code	Nomenclature of course	Theory (T)/ Practical (P)	Credits		Contact hours per week L: Lecture P: Practical T: Tutorial				Internal Assessment Marks	End Term Examination Marks	Total Marks	Examination hours
						Total	L	T	P	Total				
II	CC-5	M24- GEO -201	AGRICULTURE GEOGRAPHY	T	4	26	4	0	0	4	30	70	100	3
	CC-6	M24- GEO -202	RESEARCH METHODOLOGY IN GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
	CC-7	M24- GEO -203	FUNDAMENTALS OF REMOTE SENSING	T	4		4	0	0	4	30	70	100	3
	CC-8	M24- GEO -204	EVOLUTION OF GEOGRAPHICAL THOUGHT	T	4		4	0	0	4	30	70	100	3
	PC-3	M24- GEO -205	FIELD SURVEY BASED REPORT	P	4		0	0	8	8	30	70	100	4
	PC-4	M24- GEO -206	ANALYTICAL PHYSICAL GEOGRAPHY	P	4		0	0	8	8	30	70	100	4
	CHM	M24-CHM & IPR-201	CONSTITUTIONAL, HUMAN AND MORAL VALUES AND IPR	T	2		2	0	0	2	15	35	50	3
	Internship	M24-INT-200	An internship course of 4 Credits of 4-6 weeks duration during summer vacation after IInd semester is to be completed by every student. Internship can be either for enhancing the employability or for developing the research aptitude.								50	50	100	

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Semester	Course Type	Course Code	Nomenclature of course	Theory (T)/ Practical (P)	Credits		Contact hours per week L: Lecture P: Practical T: Tutorial				Internal Assessment Marks	End Term Examination Marks	Total Marks	Examination hours
						Total	L	T	P	Total				
III	CC-9	M24- GEO-301	ECOLOGY AND CONSERVATION	T	4	26	4	0	0	4	30	70	100	3
	CC-10	M24- GEO -302	GEOGRAPHICAL INFORMATION SYSTEM AND GPS	T	4		4	0	0	4	30	70	100	3
	PC-5	M24- GEO -303	DIGITAL IMAGE PROCESSING TECHNIQUES	P	4		0	0	8	8	30	70	100	3
	PC-6	M24- GEO -304	PRACTICAL IN HUMAN GEOGRAPHY	P	4		0	0	8	8	30	70	100	3
	DSE-1	M24- GEO -305	URBAN GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
		M24- GEO -306	POLITICAL GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
		M24- GEO -307	REGIONAL PLANNING & DEVELOPMENT	T	4		4	0	0	4	30	70	100	3
	DSE-2	M24- GEO -308	POPULATION GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
		M24- GEO -309	GEOGRAPHY OF TRANSPORTATION	T	4		4	0	0	4	30	70	100	3
		M24- GEO -310	GEOGRAPHY OF TOURISM	T	4		4	0	0	4	30	70	100	3
	OEC	M24- GEO -311	GEOGRAPHY OF INDIA	T	2		2	0	0	2	15	35	50	3

Semester	Course Type	Course Code	Nomenclature of course	Theory (T)/ Practical (P)	Credits		Contact hours per week L: Lecture P: Practical T: Tutorial				Internal Assessment Marks	End Term Examination Marks	Total Marks	Examination hours
						Total	L	T	P	Total				
IV	CC-11	M24- GEO -401	OCEANOGRAPHY	T	4	26	4	0	0	4	30	70	100	3
	CC-12	M24- GEO -402	SOCIAL & CULTURAL GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
	PC-7	M24- GEO -403	GEOGRAPHICAL INFORMATION SYSTEM	P	4		0	0	8	8	30	70	100	3
	PC-8	M24- GEO -404	PRACTICAL IN TOURISM MANAGEMENT	P	4		0	0	8	8	30	70	100	3
	DSE-3	M24- GEO -405	DISATER MANAGEMENT	T	4		4	0	0	4	30	70	100	3
		M24- GEO -406	HYDROLOGY AND WATER RESOURCE MANAGEMENT	T	4		4	0	0	4	30	70	100	3

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		M24- GEO -407	TROPICAL CLIMATOLOGY	T	4		4	0	0	4	30	70	100	3
	DSE-4	M24- GEO -408	ENVIRONMENTAL GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
		M24- GEO -409	FUNDAMENTALS OF SOIL GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
		M24- GEO -410	GEOGRAPHY OF HARYANA	T	4		4	0	0	4	30	70	100	3
	EEC	M24- GEO -411	INDIGENOUS KNOWLEDGE SYSTEM IN RESOURCE MANAGEMENT	T	2		2	0	0	2	15	35	50	3
			OR											
Semester	**Course Type**	**Course Code**	**Nomenclature of course**	**Theory (T)/ Practical (P)**	**Credits**		**Contact hours per week L: Lecture P: Practical T: Tutorial**				**Internal Assessment Marks**	**End Term Examination Marks**	**Total Marks**	**Examination hours**
						Total	**L**	**T**	**P**	**Total**				
IV	CC-11	M24- GEO -401	OCEANOGRAPHY	T	4	26	4	0	0	4	30	70	100	3
	DSE-3	M24- GEO -405	DISATER MANAGEMENT	T	4		4	0	0	4	30	70	100	3
		M24- GEO -406	HYDROLOGY AND WATER RESOURCE MANAGEMENT	T	4		4	0	0	4	30	70	100	3
		M24- GEO -407	TROPICAL CLIMATOLOGY	T	4		4	0	0	4	30	70	100	3
	DSE-4	M24- GEO -408	ENVIRONMENTAL GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
		M24- GEO -409	FUNDAMENTALS OF SOIL GEOGRAPHY	T	4		4	0	0	4	30	70	100	3
		M24- GEO -410	GEOGRAPHY OF HARYANA	T	4		4	0	0	4	30	70	100	3
	EEC	M24- GEO -411	INDIGENOUS KNOWLEDGE SYSTEM IN RESOURCE MANAGEMENT	T	2		2	0	0	2	15	35	50	3
	D	M24- GEO -412	DISSERTATION/PROJECT WORK	D	12		0	0	0	12	100	200	300	3

CC-1			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	I		
NameoftheCourse	**CLIMATOLOGY**		
CourseCode	M24-GEO-101		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Enhance the knowledge about atmospheric constituents and structure. • Develop scientific understanding about climatic elements and their characteristics. • Sharpen the understanding about atmospheric moisture, stability, instability and weather system. • Enrich the knowledge about climatic classification, climate change and global warming.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Definition, Nature and Scope of Climatology. Origin, Development and Importance of Atmosphere. Solar radiation and heat budge. Temperature: factor affecting, horizontal and vertical distribution..	15
II	Atmospheric pressure, its relation with temperature and other atmospheric factors, world pressure belts and global distribution pattern of pressure. Atmospheric circulation: Major wind belts of earth, Walker circulation; El Nino, La Nina and ENSO, Monsoon: theories of its origin and	15

	characteristics of Indian monsoon.	
III	Precipitation: process, forms, and theories. Types and world distribution of rainfall. Stability and instability of atmosphere: air masses, fronts, origin and characteristics of extra tropical and tropical cyclones. Climatic classification of world by Koeppen and Thornthwaite	15
IV	Climatic change: reconstruction of past climate (Dendrochronology and Pollen studies) and theories of climate change. Human induced climate change and Global warming. Impacts of climate change on agriculture and vegetation of world.	15
TotalContactHours		60

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Chritchfield, H. J. (2008): General Climatology, Prentice Hall of India, New Delhi.
2. Barry, R. G. and Chorley, R. J. (2010): Atmosphere, Weather and Climate, Routledge, London.
3. Lal, D. S. (2011): Climatology, Sharda Pustak Bhawan, Allahabad.
4. Das, P. K. (1995): The Monsoons, National Book Trust, New Delhi.
5. Singh S. (2013): Climatology, Pravalika Publications, Allahabad.

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CC-2			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	I		
NameoftheCourse	**GEOMORPHOLOGY**		
CourseCode	M24-GEO-102		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Comprehensive Understanding of Geomorphology. • Analysis of Geological Processes. • Interpretation of Geological Theories. • Regional Geomorphological Application.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Definitions, Nature, Scope and Concept of Geomorphology, Geological Time Scale. Approaches and Models in Geomorphology, Recent Trends in Geomorphological Studies.	15
II	Geomorphic process: Weathering factors, processes and landforms. Mass wasting: resultant landforms. Global plateTectonic Theory and Resultant Landforms.	15
III	Theories and Process of Slope Development. Landforms: Fluvial, Karst, Aeolian, Glacial Process) .	15
IV	Regional Geomorphology context of Kashmir Himalaya, Bundelkhandplateau, Thar Desert, Indian Islands, and Western	15

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	Ghat.Applied Geomorphology.			
TotalContactHours				60
SuggestedEvaluationMethods				
InternalAssessment:30			**EndTermExamination:70**	
➢ **Theory**		**30**	➢ **Theory:**	**70**
• ClassParticipation:		5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:		10		
• Mid-TermExam:		15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Bloom, A.L. (2002). Geomorphology. Private Limited, New Delhi.
2. Cooke, R.U. and Dounkamp, J.C. (1990). Geomorphology in Environmental Management: A New Introduction. Clarendon Press.
3. Critchfield, H.J. (1997). General Climatology. Prentice Hall of India Pvt. Ltd, New Delhi.
4. Emlenton, C. and Thorne, J. (1979). Process in Geomorphology. Edward Arnold, London.
5. Goudie, A. (1984). The Nature of the Environment: An Advanced Physical Geography. Basil Blackwell Publishers, Oxford.
6. Hamblin, W.K. (1995). Earth's Dynamic System. Prentice Hall, NJ.
7. Kale, V.S. and Gupta, A. (2001). Introduction to Geomorphology. Orient Longman, Hyderabad.
8. Michael, A. Summerfield (1991). Global Geomorphology. Prentice Hall.
9. Monkhouse, F.J. (2009). Principles of Physical Geography. Platinum Publishers, Kolkata.
10. Ritter, D.F., Kochel, R.C. and Miller, J.R. (1995). Process Geomorphology. Dubuque, Win C. Brown Publishers.
11. Sharma, H.S. and Kale, V.S. (2009). Geomorphology in India. PrayagPustak Bhawan, Allahabad.
12. Sharma, V.K. (2010). Introduction to Process Geomorphology. Taylor and Francis, London.
13. Singh, S. (2002). Geomorphology. PrayagPustak Bhawan, Allahabad.
14. Strahler, A.A. and Strahler, A.N. (2002). Physical Geography: Science and Systems of the Human Environment. John Wiley and Sons, INC.
15. Strahler, A.H. and Strahler, A.N. (1992). Modern Physical Geography. John Wiley and Sons, INC.

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CC-3			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	I		
NameoftheCourse	**WOLRD ECONOMIC GEOGRAPHY**		
CourseCode	M24-GEO-103		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Economic Geography and Location Factors. • Economic Development and Sustainability. • Economic Development Theories and Location Theories. • Global Energy Resources and Economic Policies.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Definition, Scope and Approaches of Economic Geography; Factors of location of economic activities (Physical, social, economic and cultural).	15
II	World economies: bases of classification, patterns and characteristics of developed and developing economies of the world. Economic development: Concept andstages of economic development (classical and contemporary: Rostow's models).	15
III	World Economy and The Capitalist Mode of Production, The Basic Elements of World Economy: Dynamics of World Economy, Spatial Structure of The World Economy.	15
IV	Globalization and World Economic: GATT, and WTO; functions and	15

	relevance. Human Development Index, Global Hunger Index	
TotalContactHours		60

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Aoyama, Y., Murphy, J., & Hanson, S. (2010): Key Concepts in Economic Geography, London: Sage.
2. Bagchi-Sen, S., & Smith, H. L. (2006): Economic Geography: Past, Present and Future, London and New York: Taylor and Francis.
3. Barnes, T., Peck, J., Sheppard, E., & Tickell, A. (Eds) (2003): Reading Economic Geography, London: Wiley-Blackwell.
4. Coe, N., Kelly, P., & Yeung, H. (2007): Economic Geography: A Contemporary Introduction, John Wiley & Sons, London.
5. Combes, P., Mayer, T., &Thisse, J. F. (2008): Economic Geography: The Integration of Regions and Nations, Princeton University.
6. Gautam, A. (2010): Advanced Economic Geography, Sharda Pustak Bhawan, Allahabad.
7. Hartshorne, T. A., & Alexander, J. W. (2001): Economic Geography, Prentice Hall of India, New Delhi.
8. Hudson, R. (2005): Economic Geographies: Circuits, Flows and Spaces, London: Sage.
9. Jones, C. F., &Darkenwald, G. G.: Economic Geography, The Macmillan and Company, New York.
10. Knox, P. (2003): The Geography of World Economy, Arnold, London.

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CC-4			
Session:2024-25			
PartA–Introduction			
Name of Programme	M.Sc. Geography		
Semester	I		
NameoftheCourse	**GEOGRAPHY OF INDIA**		
CourseCode	M24-GEO-104		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Enhance the knowledge about physical structure of India • Development scientific understanding about demographic and their characteristics. • Understand the economic structure of India. • The students will appreciate the relevance of geographical know ledge of India to understand the contemporary issues.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Physiographic division of India; Drainage systems" Mechanism of Indian monsoons and climatic regions of India: types of soils and natural vegetation.	15
II	Growth of population, Distribution and density of population; Demographic attributes; sex-ratio, literacy rate and work force; population problems and policies.	15
III	Characteristics of Indian agriculture and its development since	15

	independence; Agricultural region of India; Major industrial regions of India; domestic and international trade patterns; Transportation network.	
IV	Evolution of administrative map of India since independence; Disputes of river water sharing amongst states with reference to SYL; Inter -linking of rivers; Terrorism problems of internal security; Population explosion and food security.	15
TotalContactHours		60

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Spare, O.H.K. and A.T.A. learmonth: Geography of India and Pakistan, Methuen London (first Indian Edition, 1984, MunshiramManoharlal, New Delhi) 1967.
2. Gautam A: Advanced Geography of India, Sharda Pustakbhawan, allahabad,2009.
3. Sharma,T.C. and Coutinho, O: Economical and commercial Geography of India,Vikas publishing house Pvt. Ltd. New Delhi,1988.
4. Chandna, R.C.: Geography of Population, Kalyani Publishers, 1998.
5. Tirtha, Ranji : Emerging India, Conpub. Ann Arbour, U.S.A. Michigan, 2006.

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PC-1			
Session:2024-25			
PartA–Introduction			
NameoftheProgramme	M.Sc. Geography		
Semester	I		
Name of the Course	**COMPUTER-BASED DATA MANAGEMENT IN GEOGRAPHY**		
Course Code	M24-GEO-105		
Course Type:	PC		
Level of the course (As per Annexure-I	500-599		
Pre-requisite for the course (if any)	NA		
Course Learning Outcomes (CLO): After completing this course, the learner will be able to:	• Enhance the knowledge about basic computer functions. • Develop an understanding of processing data in MS Excel. • Sharpen the understanding of making and uses of various diagrams in MS Excel. • Enrich the knowledge about making PPT and preparing reports in MS Word.		
Credits	Theory	Practical	Total
	00	04	04
Teaching hours per week	00	08	04
Internal assessment marks	00	30	30
End term examination marks	00	70	70
Max Marks	00	100	100
Examination Time	03 Hour	-	-
Part B- Contents of the Course			
Instructions for Paper-Setter The examiner shall set four questions. All questions are compulsory. Distribution of Marks for Evaluation: **Distribution of Marks for Evaluation** **Exercise=10x4=40 FileRecord = 20 Viva-voce= 10**			

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Unit	Topics	Contact Hours
I	Introduction to Computer System: Hardware and Software Introduction to MS Office	30
II	Entering and Management of Data using spreadsheets Uses of basic statistical tools to process the data	30
III	Representation of Geospatial Data Line Graph (single and polygraph) Bar graph (simple, compound and multiple) Pie Charts X, Y scatter plots Trend line	30
IV	Introduction to MS Power point and making of power point presentation. Introduction to MS Word and uses of various tools in Report Writing in MS Word.	30
	Total Contact Hours	120
Suggested Evaluation Methods		
Internal Assessment: Practicum: 30 Class Participation: 10marks Seminar/presentation/assignment/quiz/class test/Viva-voce etc.: 20 marks		Exercise -40 Viva-Voce-10 File record-20
Part C-Learning Resources		
Recommended Books/e-resources/LMS: https://support.microsoft.com/en-us/training		

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PC-2			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	I		
NameoftheCourse	**QUANTITATIVE METHODS IN GEOGRAPHY**		
CourseCode	M24-GEO-106		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Understand tools of quantitative information and data. • Gain knowledge about statistical analysis of spatial patterns from geographical data. • Acquaintance with bivariate and multivariate analytical techniques. • Understand the concept of Hypothesis and Hypothesis testing in geography.		
Credits	Theory	Practical	Total
	0	4	4
TeachingHoursperweek	0	8	8
InternalAssessmentMarks	0	30	30
End-TermExamMarks	0	70	70
Max.Marks	0	100	100
ExaminationTime	3 hours		

Part B- Contents of the Course

Instructions for Paper-Setter

Note for Paper Setters: The examiner shall set four questions. All questions are compulsory.

Distribution of Marks for Evaluation

Exercise=10x4=40 FileRecord = 20 Viva-voce= 10

Unit	Topics	Contact Hours
I	Data Measurement in Geography: Nominal, Ordinal, Interval, and Ratio Scale. Measures of central tendency: mean, median, mode. Measures of dispersion: absolute measures: range, quartile deviation, mean deviation, standard deviation, relative measure of dispersion: coefficient of variation.	30
II	Sampling theory and Type of Sampling, probability, and non-probability. Normal curve as a probability distribution: characteristics and area under	30

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	the curve.	
III	Bivariate analysis in geographical studies: correlation analysis, Spearman's rank correlation and Karl Pearson's correlation coefficient. Simple linear regression model: estimation of regression equation (least square method),	30
IV	Hypothesis testing with Z- test, t-test and chi-square test, Analysis of Variance. Residuals and their mapping.	30
TotalContactHours		120

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Practicum**	**30**	➢ **Practicum**	**70**
• class participation:	10	Exercise -40	
• Seminar/Demonstration/Viva-voce/Lab records etc.:	20	Viva-Voce-10 File record-20	

RecommendedBooks/e-resources/LMS:

1. Gregory,S.StatisticalMethodsandtheGeographers,Longman,London,1964.
2. Gupta,C.B.AnIntroductiontoStatisticalMethods,VikasPublishingHouse,Delhi,1974.
3. Johnston,R.J.MultivariateStatisticalAnalysisinGeography,LongmanScientificand Technical,JohnWiley&Sons, 1989.
4. Mahmood,A.StatisticalMethodsinGeographicalStudies,RajeshPublications,NewDelhi,1993.
5. Pal,S.K.StatisticsforGeoscientists:TechniquesandApplications,ConceptPublishing Company,New Delhi,1998.
6. Houshmand, A.R. Statistical Methods for Environmental and AgriculturalSciences,CRC Press,New York,1998.
7. Levin,JandFox,J.A.ElementaryStatisticsinSocialResearch,PearsonEducation,New Delhi,2006.
8. Rogerson.P.A.StatisticalMethodsforGeography,SagePublication,NewDelhi,2010.
9. Sarkar,A.QuantitativeGeography:TechniquesandPresentations.2013.

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SEM	
Session:2024-25	
NameoftheProgramme	M.Sc.Geography
Semester	I
NameoftheCourse	Seminar
CourseCode	M24-GEO-107
CourseType:(CC/DEC/PC/Seminar/CHM/OEC/EEC)	Seminar
Levelofthecourse	400-499
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• improvethearticulationandpresentationskills of students. • analyzeandcomprehendthegivenproblem.
Credits	Seminar
	2
TeachingHoursperweek	2
Max.Marks	50
InternalAssessmentMarks	50
ExaminationTime	1 hour

Instructions for Examiner: students shall submit a topic of his/her own interest within 15 days of the commencement of classes students as submit the PPTin hard and soft copy to the department 20 days before the commencement of the exam. The staff council will decide the dates of the seminar and evaluate accordingly.

Note: Any request of the students for submission and evaluation of his /her seminar after the commencement of the final exam shall not be entertained.

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CC-5			
Session:2024-25			
PartA–Introduction			
Name of Programme	M.Sc. Geography		
Semester	II		
NameoftheCourse	**AGRICULTURE GEOGRAPHY**		
CourseCode	M24-GEO-201		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeableto:	• Understanding Agricultural Geography and Its Determinants. • Approaches and Concepts in Agricultural Geography. • Agricultural Land Use and Regionalization. • Government Policies, Institutions, and Climate Impact on Agriculture.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
EndTermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks..

Unit	Topics	Contact Hours
I	Nature, scope and significance of agricultural geography; 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.	15
II	Concepts of land capability classification, recent techniques in agriculture (agroforestry, contract farming, agri-business) Concepts of intensity of cropping, degree of commercialization, cropping diversification and concentration, crop combination; Von Thunen model of agricultural land	15

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	use.	
III	Agricultural regionalization: concept and criteria; Whittlesey's Agricultural systems, .Agro-climatic region: concept and Indian experiences	15
IV	Govt. of India Policies and Institutions (Role of ICAR, KVKs, Commodity Boards (Tea Board/Coffee Board/Marketing Organisations agriculture seed bank.), Impact of Climate Change: Agriculture and Water.	15
	TotalContact Hours	60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• class participation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-learning resources

RecommendedBooks/e-resources/LMS:

1. Bowler, T. R. (1992): The Geography of Agriculture in Developed Market Economics, Longman.
2. Geoffrey, H. F. (1970): Geography of Agriculture: Themes in Research, Practice Hall, N.J.
3. Grigg, D. (1995): Introduction to Agricultural Geography, Routledge, London.
4. Husain, Majid (1996): Systematic Agricultural Geography, Rawat Publications, Jaipur.
5. Morgan, W. B. &Munton, R. J. C. (1971): Agricultural Geography, Methuen, London.
6. Singh, Jasbir & Dhillon, S. S. (1994): Agricultural Geography, Tata McGraw Hill, New Delhi.
7. Safi, Mohammad (2007): Agricultural Geography, Prentice-Hall of India.
8. Singh, Jasbir (1989): Agricultural Geography.
9. Tarrant, J. R. (1974): Agricultural Geography, Wiley, New York.
10. Ferroni, Marco (2013): Transforming Indian Agriculture - India 2040: Productivity, Markets and Institutions, Sage Publications, New Delhi.
11. Mohammad, N. & Rai, S. C. (2014): Agricultural Diversification and Food Security in the Mountain Ecosystem, Concept Publishing Company, New Delhi.
12. Roling, N. G. &Wageruters, M. A. E. (Eds.) (1998): Facilitating Sustainable Agriculture, Cambridge University Press, Cambridge.

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CC-6			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	II		
NameoftheCourse	**RESEARCH METHODOLOGY IN GEOGRAPHY**		
CourseCode	M24-GEO-202		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Understand and Differentiate Research Types and Methods. • Identify and Formulate Research Problems and Develop and Test Hypotheses. • Acquire and Analyze Data. • Conduct Pilot Studies and Select Case Studies. • Apply Qualitative Research Methods. • Process and Analyze Data Using Statistical and Cartographic Techniques. • Write Comprehensive Research Reports.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Research: Meaning, Definition - Types and Methods- Fundamental, theoretical research, Empirical, Diagnostic and action-oriented research. Concepts in Research: Identification and selection of Research problem,	15

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	review of literature.Hypothesis - Types, Characteristics and functions, Formulation and testing of Hypothesis	
II	Type of data and their source: Data acquisition Techniques :Interview, Questionnaire, Schedule; interpretation of data. Need and importance of pilot study, Selection of case studies.	15
III	Qualitative methods - Foundations of Qualitative Methods, Interviews, Focus groups,Ethnography, Participant Observation, Case Study, Discourse analysis– Participatory research	15
IV	Introduction to abstract, synopsis and research paper. Research reports: Writing preliminaries, main body of research, references and bibliography (APA, MLA), Glossary, Appendix, Plagiarism. Meaning and concept of workshop, seminar, conference, symposium.	15
TotalContactHours		60

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Research Methodology - Methods and Techniques, Revised Edited by C.R. Kothari (2004), New Age International Publishers, New Delhi.
2. Social Research Methods by David Dooley (1995), Prentice Hall, London.
3. A Survey Research in Geography- ICSSR, New Delhi (1972), Popular Prakashan, Bombay.
4. A Survey Research in Geography -1969-1972, Edited by Moonis Raza (1979), Allied Publishers Private Limited, Bombay.
5. Doing Development Research by Vandana Desai and Robert B Potter (2006), Sage Publications, New Delhi.
7. New Methods in Social Science Research by Allen, T. Harrell (1978), Praeger Publishers, New York.
10. Research Methodology in Social Science in India, edited by L.P Vidyarthi and A.K . Helder(1985), today and tomorrow printers and publishers.
11. Quantitative Social Research Methods by Kultar Singh (2007), Sage Publication.
12. Social Survey Methods by Paul Nicholas (2009), Oxfarm Publishers Delhi.
15 Fourth Survey of Research in Geography, G.S.Gosal (1999), Manak publication.
16 Contributions in Indian Geography R.P. Misra (1983), Hilky publishers, NewDelhi.

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CC-7			
Session: 2024-25			
Part A – Introduction			
NameofProgramme	M.Sc.Geography		
Semester	II		
NameoftheCourse	**FUNDAMENTALS OF REMOTE SENSING**		
CourseCode	M24-GEO-203		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Understanding Photogrammetry and Aerial Photography. • Fundamentals of Remote Sensing and Electromagnetic Radiation. • Remote Sensing Platforms, Sensors, and Image Processing. • Applications and Indices in Remote Sensing.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Photogrammetry: History and Development. Aerial Photographs: Types, Geometry, Methods of Determining Scale. Ground Coverage and Overlapping; Stereoscopes and Stereoscopic Vision, Element of aerial photo interpretation.	15
II	Remote Sensing: Meaning and Basic Principles/Concepts. Electromagnetic Radiations (EMR); Electromagnetic Spectrum; Interaction of EMR with Atmosphere and Earth's Surface Features.Basic Principles of Thermal and Microwave Remote Sensing.	15

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III	Remote Sensing Platforms- Types and Characteristics; Satellite Orbits- Near Polar and Geostationary Orbits. Sensors- Types, Specifications and Resolutions (Landsat, LISS and Cartosat). Elements of Image Interpretation; Digital Image Processing: Supervised and Unsupervised Classification.	15
IV	Calculation and application of various indices (NDVI, NDWI) Remote Sensing Set up and Programmers in India,Remote Sensing Data Applications.	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Kumar, D.; Singh, R.B. and Kaur, R. (2019). Spatial Information Technology for Sustainable Development Goals. Springer Nature, Switzerland.
2. Gupta, R.P. (2018). Remote Sensing Geology (3rd Edition). Springer Nature, Switzerland.
3. Kron, G. (2017). Global Navigation Satellite Systems: Signal, Theory & Applications. Wilmington: Scitus Academics.
4. Chuveico, E. (2016). Fundamentals of Satellite Remote Sensing — An Environmental Approach (2 nd Edition). CRC Press, Roca Raton.
5. Chaunial, D.D. (2016). Principles of Remote Sensing and Geographical Information System (In Hindi), Sharda Pustak Bhawan, Allahabad.
6. Heywood, I.; Cornelius, S. and Carver, S. (2011). An Introduction to Geographic Information Systems (4 th Edition). Pearson Education, New Delhi.
7. Longley, P.A.; Goodchild, M.; Maguire, D.J. and Rhind, D.W. (2010). Geographic Information Systems and Science (3rd Edition). John Wiley, New Jersey:
8. Sabins, F.F. (2007). Remote Sensing: Principles and Interpretation (3rd Edition). Waveland Press, Long Grove.
9. Lillesand, T.M.; Kiefer, R.W. and Chipman, J.W. (2004). Remote Sensing and Image Interpretation (5th Edition). John Wiley India, New Delhi.
10. Joseph, George (2003). Fundamental of Remote Sensing, University's Press (India) Pvt.

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CC-8			
Session: 2024-25			
Part A – Introduction			
NameofProgramme	M.Sc.Geography		
Semester	II		
NameoftheCourse	**EVOLUTION OF GEOGRAPHICAL THOUGHT**		
CourseCode	M24-GEO-204		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Develop an understanding on nature and philosophy of geography. • Have geographical knowledge regarding ancient and medieval period. • Acquaint with philosophical development in subject. • Acquire knowledge of modern geographical thinking.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Classification of knowledge, Nature of geography and its place among sciences. Geographic knowledge during ancient (Greek and Roman) and medieval (Arab) periods. Contribution of Ancient Indian scholars in geographical development. Foundation of Modern Geography: contributions of Varenius, Kant, Humboldt and Ritter.	15

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II	Geography as a study of: Physical features, chorology, landscape science. Concepts in Geography: Environmental determinism, Possibilism, Neo-determinism, aerial differentiation. Dualism in geography: Physical vs Human geography, systematic vs regional geography.	15
III	Quantitative Revolution: Emergence of geography as spatial science. Positivist Explanations in Geography: Laws, theories, hypotheses, models. Scientific explanations: routes to scientific explanations (Inductive and Deductive approach), cause and effect analysis.	15
IV	Modern approaches in geography: Behavioral and Humanistic Perspectives in Geography, Welfare approach, Radical approach, Structuralism and postmodernism.	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Dickinson, R. E. (1969): The Makers of Modern Geography, Routledge, London.
2. Dikshit, R. D. (2018): Geographical Thought- A Contextual History of Ideas, Prentice Hall of India, New Delhi.
3. Harvey D. (1989): Explanation in Geography, Edward Arnold, London.
4. Hartshorne, R. (2000): Perspectives on the Nature of Geography, Rand MacNelly, Chicago.
5. James PE and Martin J Geoffrey (1993): All possible Worlds, John Wiley and Sons, New York.
6. Johnston, R. J. (2017): Geography and Geographers, Edward Heinemann, London
7. Peet, R.(2011): Modern Geographical Thought, Oxford, Blackwell Publishers.

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PC-3			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	II		
NameoftheCourse	**FIELD SURVEY BASED REPORT**		
CourseCode	M24-GEO-205		
CourseType	PC		
Levelofthecourse	500-599		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• The students will learn various field observation and primary data collection skills. • The students will know how the statistical methods will be applied in geography.		
Credits	Theory	Practical	Total
	0	4	4
TeachingHoursperweek	0	8	8
InternalAssessmentMarks	0	30	30
End-TermExamMarks	0	70	70
Max.Marks	0	100	100
ExaminationTime	3 hours		
PartB-ContentsoftheCourse			
Instructions: Candidates are required to submit their filed reports one week before the commencement of the semester examination. A comprehensive survey report on the area/region shall be submitted by the students within two weeks of their return from the tour. The report shall be EvaluatedBy the concerned teacher for recommendationsbased on which the students appear for the final viva -voce examination.			
Since this paper is of a practical nature only, therefore contents of the syllabus need not be organized into units. Students must prepare a field survey report based on field investigation and data collection from the visited areas. The students of M. Sc. (IInd Semester are required to study and submit their filed survey reports (socio-economic data or physical data) for evaluation and viva voce examination. The duration of the main fieldvisit will be minimum for a period of one week where a single teacher will supervise 15-20 students at a time.The fieldvisit will cover the following region/ regions of India decided by the staff council. The classroom teaching would include preliminaries of surveys to equip the students for the fieldwork and surveyreports. • **The PlateauRegion.** • **The Coastal Region.** • **The MountainRegion.** • **The North Eastern States.** • **The Desert Region.** • **The Central India.**			

TotalContactHours			120
SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:100**	
➢ **practicum:**	**30**	➢ **practicum:**	**70**
• ClassParticipation:	10	**Field Report : 50**	
• Seminar/presentation/assignment/quiz/class testViva-voceetc.:	20	**Viva-voce: 20**	

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Archer, J.E. and Dalton, T.H.: Field Work in Geography, E.T. Bastaford Ltd., London, 1968.
2. Creswell, John W., Research Design; Qualitative, Quantitative and Mixed Methods Approach, SAGE Publications, Los Angeles, 2008.
3. Flick, U. An Introduction to Qualitative Research, 5th Edition, SAGE, 2014.
4. Jones, P.A.: Field Work in Geography, Longman, London, 1968.
5. Kothari, C. R., Research Methodology, Methods & Techniques, New Age International Publisher, N. Delhi, 2008.
6. Kumar Ranjit, Research Methodology: A step-by-step Guide for Beginners, SAGE Publications, Ltd. London (Third Edition), 2010.
7. Montello, D. and P. Sutton, An Introduction to Scientific Research Methods in Geography and Environmental Studies, SAGE, 2012.

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PC-4			
Session:2024-25			
Part–Introduction			
NameoftheProgramme	M.Sc. Geography		
Semester	I		
Name of the course	**ANALLITICAL PHYSICAL GEOGRAPHY**		
CourseCode	M24-GEO-206		
CourseType	PC		
Levelofthecourse	500-599		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse, the learner will be able to:	• Represent the diagram/graphs using different climatic data and other diagrams through cartographic techniques. • understand the history, basic concepts and significance of morphometric analysis. • Draw watersheds and profiles and interpret them. • Represent the ordering, linear and areal aspects of the drainage basin. • Prepare the slope and relief maps of the drainage basin.		
Credits	Theory	Practical	Total
	0	4	4
TeachingHoursperweek	0	8	8
InternalAssessmentMarks	0	30	30
EndTermExamMarks	0	70	70
Max.Marks	0	100	100
ExaminationTime		3 Hours	

Part B- Contents of the Course

Instructions for Paper-Setter

Note for Paper Setters: The examiner shall set four questions. All questions are compulsory.

Distribution of Marks for Evaluation

Exercise=10x4=40 **FileRecord = 20** **Viva-voce= 10**

Practical's		**ContactHours =120**
Unit-I	Representation of Climatic data: Rainfall deviation, Climograph (Taylor and Foster), Hythergraph, Star/Wind rose diagram,	30
Unit-II	Representation of data :Time series analysis: moving average of rainfall and temperature data.Ergograph.Isohytes.Rainfall deviation diagram.Index of Aridity and index of Moisture. Koppen's Climatic classification.	30
Unit-	Morphometric Analysis: Profile analysis: Transverse;	30

III	Serial,superimposed, composite and projected),longitudinal profile. Drainage network analysis: drainage frequency and density. Linear aspect: relationship between stream order and number and bifurcation ratio.	
Unit-IV	Relief aspect of drainage basin: Area-height curve and Hypsometric integral curve. Slope analysis average slope(Wentworth's)and relative relief (G.H Smith's method).Representation and Interpretation of Physical features and Cultural features from topographical maps.	30
Total hour		

Suggested Evaluation Methods

Internal Assessment:30		**EndTerm Examination:70**	
➢ **Practicum**	**30**	➢ **Practicum**	**70**
• class participation:	10	Exercise -40	
• Seminar/Demonstration/Viva-voce/Labrecords etc.:	20	Viva-Voce-10 File record-20	

PartC-Learning Resources

Recommended Books/e-resources/LMS:

1. Gupta, K. K. & Tyagi, V. C. (1992): Working with Maps, Survey of India, DST, New Delhi.
2. Monkhouse, F. J. & Wilkinson, H. R. (1971): Maps and Diagrams, Methuen and Co. Ltd., London.
3. Ramamurthy, K. (1982): Map Interpretation, Rex Printers, Madras.
4. Siddhartha, K. (2006): Geography through Maps, Kisalaya Publications Pvt. Ltd., Delhi.
5. Singh, L. R. & Singh, R. (1973): Map Work and Practical Geography, Central Book, Allahabad.
6. Singh, R. L. (2005): Elements of Practical Geography, Kalyani Publishers, New Delhi, India.
7. Dury, G. H. (1966): Essays in Geomorphology, Heinmann, London.
8. Misra, R. P. & Ramesh, A. (1999): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
9. Singh, R. L. (1986): Elements of Practical Geography, Kalyani Publications, New Delhi.
10. Singh, S. (2022): Geomorphology, PrayagPustak.
11. Strahler, A. H. & Strahler, A. N. (2000): Physical Geography, Wiley.

CHM			
Session:2024-25			
PartA–Introduction			
NameofProgramme	Common to all PG Programmes		
Semester	II		
NameoftheCourse	**CONSTITUTIONAL, HUMAN AND MORAL VALUES AND IPR**		
CourseCode	M24-GEO-201		
CourseType	CHM		
Leveloftheccourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	LO-1: Learn the different constitutional values, fundamental rights and duties enshrined in the Indian Constitution. CLO-2: Understand humanism, human virtues and values, and ide of International peace. CLO-3: Grasp the basic concept of Mora! Values and Professional Conduct which are required to become a part of the civil society and for developing professionalism. CLO-4:Understandconcepts of Intellectual Property Rights, Copyright, Patent, Trademark, etc., and threats of Plagiarism.		
Credits	Theory	Practical	Total
	2	0	2
TeachingHoursperweek	2	0	2
InternalAssessmentMarks	15	0	15
End-TermExamMarks	30	0	30
Max.Marks	50	0	50
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking course learning outcomes (CLOs) into consideration. The compulsory question (Question No. 10 will consist of 7 parts covering the entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Constitutional Value: Historical Perspective of Indian Constitution; Basic Values enshrined in the Preamble of the Indian Constitution; Concept of Constitutional	8

	Morality; Patriotic Values and Ingredients Nation Building; Fundamental Rights and Duties; Directive Principles of the State Policy.	
II	Humanistic Values: Humanism, Human Virtues and Civic Sense; Social Responsibilities of Human Beings; Ethical ways to deal with human aspirations; Harmony with society and nature; Idea of International Peace and Brotherhood VasudhaivKutumbkam)	7
III	Moral Values and Professional Conduct : Understanding Morality and Moral Values; Moral Education and Character Building; Ethics of Relations: Personal, Social, and Professional; Introduction to Gender Sensitization; Affirmative Approach towards Weaker Sections (SCs, STS, OBCs, EWS& DAs); Ethical Conduct in Higher Education Institutions; Professional Ethics.	8
IV	Intellectual property Rights: Meaning, Origins and Nature of Intellectual Property Rights (IPRS); Different Kinds of IPRs Copyright, Patent, Trademark, Trade Secret/Dress, Design, Traditional Knowledge; Infringement and Offences of IPRS Remedies and Penalties; Basics of Plagiarism policy of UGC.	7
	Note: The scope of the syllabus shall be restricted to the generic and introductory level of mentioned topics.	
TotalContactHours		30

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**15**	➢ **Theory:**	**35**
• ClassParticipation:	4	WrittenExamination:35	
• Seminar/presentation/assignment/quiz/class testetc.:	4		
• Mid-TermExam:	7		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Ahuja, V. K. (2017): Law Relating to Intellectual Property Rights, Lexis Nexis, India.
2. Bajpai, B. L. (2004): Indian Ethos and Modern Management, New Royal Book Co., Lucknow.
3. Basu, D. D. (2008): Introduction to the Constitution of India (Students Edition), 20th ed., Prentice Hall of India Pvt. Ltd., New Delhi.
4. Dhar, P. L. & Gaur, R. R. (1990): Science and Humanism, Commonwealth Publishers, New Delhi.
5. George, Sussan (1976): How the Other Half Dies, Penguin Press.
6. Govindarajan, M., Natarajan, S., &Sendilkumar, V. S. (2004): Engineering Ethics (Including Human Values), Prentice Hall of India Private Ltd., New Delhi.
7. Harries, Charles E., Pritchard, Michael S., & Robins, Michael J. (2003): Engineering

Ethics, Thompson Asia, New Delhi.
8. Illich, Ivan (1974): Energy & Equity, Trinity Press, Worcester.
9. Meadows, Donella H., Meadows, Dennis L., Randers, Jorgen, & Behrens, William W. (1972): Limits to Growth: Club of Rome's Report, Universe Books.
10. Myneni, S. R.: Law of Intellectual Property, Asian Law House.
11. Narayanan, P.: IPRS.
12. Neeraj, P. &Khusdeep, D. (2014): Intellectual Property Rights, PHI Learning Private Limited, India.
13. Nithyananda, K. V. (2019): Intellectual Property Rights: Protection and Management, Cengage Learning India Private Limited, India.
14. Palekar, Subhas (2000): How to Practice Natural Farming, Pracheen (Vaidik) Krishi Tantra Shodh, Amravati.
15. Phaneesh, K. R.: Constitution of India and Professional Ethics, New Delhi.
16. Pyle, M. V. (2002): An Introduction to the Constitution of India, Vikas Publishing, New Delhi.
17. Raman, B. S. (2002): Constitution of India, New Delhi.
18. Reddy, B.: Intellectual Property Rights and the Law, Gogia Law Agency.
19. Reddy, N. H. & Ajmera, Santosh: Ethics, Integrity and Aptitude, McGraw Hill, New Delhi.
20. Sharma, Brij Kishore: Introduction to the Constitution of India, New Delhi.
21. Schumacher, E. F. (1973): Small is Beautiful: A Study of Economics as if People Mattered, Blond & Briggs, Britain.
22. Tripathy, A. N. (2003): Human Values, New Age International Publishers, New Delhi.
23. Wadehra, B. L.: Law Relating to Intellectual Property, Universal Law Publishing Co.

Relevant Websites, Movies, and Documentaries

- http://uhv.ac.in, http://www.uptu.ac.in.
- Story of Stuff, http://www.storyofstuff.com
- Cell for IPR Promotion and Management: http://cipam.gov.in/
- World Intellectual Property Organization: https://www.wipo.int/about-ip/en/
- Office of the Controller General of Patents, Designs & Trademarks: http://www.ipindia.nic.in/
- Al Gore, An Inconvenient Truth, Paramount Classics, USA.
- Office of the Controller General of Patents, Designs & Trademarks: IP India
- Movies and Documentaries:
- Al Gore, *An Inconvenient Truth*, Paramount Classics, USA.
- Charlie Chaplin, *Modern Times*, United Artists, USA.
- *Modern Technology - The Untold Story*, IIT, Delhi.
- Gandhi, *Right Here Right Now*, Cyclewala Productions.

CC-9			
Session:2024-25			
Part A-Introduction			
Name of Programme	M.Sc.Geography		
Semester	**III**		
Name of the Course	**ECOLOGY AND CONSERVATION**		
Course Code	M24-GEO-301		
Course Type	CC		
Level of the course	400-499		
Pre-requisite for the course(if any)	N.A.		
Course Learning Out comes(CLO) After completing this course, the learner will be able to:	• Basic understanding of evolutionary theory • Demonstrate an entry level competence in understanding the ecological dynamics, structure and function • To know about the Biodiversity and environmental degradation and various environmental problems.		
Credits	Theory	Practical	Total
	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 Time	3hours	-	-

Part B –Contents of the Course

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Evolutionary Biogeography: Theory of Evolution. Process and types of speciation. Adaptation and natural selection.	15
II	Concept of ecology and ecosystem.Population ecology: population characteristics, natality, mortality, age pyramids, sex ratio. Concept of population dispersion, and dispersal.	15
III	Community ecology: Community characteristics, Concept and types of biodiversity, Species richness, Species diversity, diversity index. Ecological succession and types: Primary and secondary succession.	15

IV	Biological classification of Flora and Fauna, Conservation of Biodiversity, IUCN and IUCN Red List, Major Threats to Biodiversity loss. Extinction of Species with Special Reference to India.	15
Total Contact Hours		60

Suggested Evaluation Methods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• Class Participation:	05	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class test etc.:	10		
• Mid-Term Exam:	15		

Part C-Learning Resources

Recommended Books/e-resources/LMS:

1. Anjuneyulu, Y. (2004). Introduction to Environmental Science. B. S. Publications, Hyderabad.
2. Chapman, J. L. and Reiss, M. J. (1995). Ecology – Principles and Applications. Cambridge University Press.
3. Dash, M. C. (2001). Fundamentals of Ecology. Tata McGraw-Hill Publishing Co. Kormondy, E. J. (1996). Concepts of Ecology. Prentice Hall of India.
4. Odum, E. P. (1971). Fundamentals of Ecology. W.B. Saunders Co.
5. Ricklefs, R. E. and Miller, (1999). Ecology. W.H. Freeman and Co.
6. Smith, T. M. and Smith, R. L. (2007). Elements of Ecology. Pearson Education.
7. Singh, S. (2007). ParyavaranBhugol. PrayagPustak Bhawan, Allahabad.
8. Singh, S. (2006). Environmental Geography. PrayagPustak Bhawan, Allahabad.
9. Mathur, H. S. (2003). Essentials of Biogeography. Pointer Publication, Jaipur.

16/7/2024

CC-10			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	III		
NameoftheCourse	**GEOGRAPHICAL INFORMATION SYSTEM AND GPS**		
CourseCode	M24-GEO-302		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• understand the basics of Geographic Information Systems. • enrich skills in the functioning of GIS. • understand the tools used in GIS. • acquire knowledge about the application of GIS.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	GIS: Definition and scope; Development of GIS, Computer requirements of GIS. Functions of GIS. Components of GIS: Hardware, Software, User. Graphic user interface of Arc GIS, SAGA GIS and Q-GIS.	15
II	Geographic Data: Spatial and Non-Spatial, their sources. Spatial Data Structure: Raster and Vector; Non spatial data: file system and DBMS. Definition and need of coordinate projection system: types, characteristics and relevance of projection system.	15
III	Data input in GIS: scanning and digitization of maps and images, Errors	15

	in GIS, editing and cleaning. Spatial Analysis in GIS: Overlay, Neighborhood and Proximity. Queries in GIS: Spatial and Non-spatial queries.	
IV	Understanding GPS; GPS satellite constellation; space segment-control segment and user segment; GPS signals and codes; Errors in GPS observations; Introduction to DGPS; GPR. GPS system: NAVSTAR, GALILIO and IRNSS. Applications of GPS.	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Burrough, P.A. and McDonnell, R. (2016): Principles of Geographic Information Systems. Oxford University Press, Oxford.
2. Chang, K. T. (2017): Introduction to Geographic Information Systems. Tata McGraw Hill Publications Company, New Delhi.
3. Demers, M. N. (2008): Fundamentals of Geographic Information Systems. John Wiley and Sons, Singapore.
4. Rahman A., (2017): Global Positioning System: Concept, Technique and Application, New Age International Pvt. Ltd, New Delhi.
5. Grewal M. S., (2013): Global Navigation Satellite Systems, Inertial Navigation and Integration, Willey-Blackwell.

PC-5			
Session:2024-25			
Part A–Introduction			
Name of the Programme	M.Sc. Geography		
Semester	III		
Name of the Course	**DIGITAL IMAGE PROCESSING TECHNIQUES**		
Course Code	M24-GEO-303		
Course Type	PC		
Level of the course	500-599		
Pre-requisite for the course (if any)	N.A.		
Course Learning Out comes(CLO) After completing this course, the learner will be able to:	• Understand the remote sensing data preparation methods. • Learn the various techniques of image enhancement. • Understand the image classification, accuracy, change detection. • Apply the knowledge of geospatial techniques in various domains of geography.		
Credits	Theory	Practical	Total
	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 Time	0	3 hours	

Part B-Contents of the Course

Instructions for Paper-Setter

Note for Paper Setters: The examiner shall set four questions. All questions are compulsory.

Distribution of Marks for Evaluation

Exercise=10x4 =40 **File Record = 20** **Viva-voce= 10**

Unit	Topics	Contact Hours
I	Satellite Data Download from USGS and BHUVAN (ISRO) etc.; Layer Stack; Mosaic and Subset. Understanding digital image (digital signature and digital numbers). Visualizing the DN values.	30
II	Georeferencing of Toposeats image to image registration. Preparation NCC and FCC making subset. Making subset and Resolution merge.	30
III	Use of filters and Contrast Stretch, Supervised classification of the image. Unsupervised classification of the image.	30
IV	Accuracy assessment of classified image. Change detection.	30

TotalContactHours		120
Suggested Evaluation Methods		
InternalAssessment:30		**EndTermExamination:70**
➢ **Practicum**	**30**	➢ **Practicum** **70**
• Class Participation:	10	Lab Exercise: 40
• Seminar/Demonstration/Viva-voce/Lab records etc.:	20	Viva-Voce:10 File record:20

Part C-Learning Resources

Recommended Books/e-resources/LMS:

1. Kumar, D.; Singh, R.B. and Kaur, R. (2019). Spatial Information Technology for Sustainable Development Goals. Springer Nature, Switzerland.
2. Peter, J.G., Teunissen and Oliver, M. (Eds.) (2019). Springer Handbook of Global Navigation Satellite Systems. Springer Nature, Switzerland:
3. Gupta, R.P. (2018). Remote Sensing Geology (3rd Edition). Springer Nature, Switzerland.
4. Kron, G. (2017). Global Navigation Satellite Systems: Signal, Theory & Applications. Wilmington: Scitus Academics.
5. Chuveico, E. (2016). Fundamentals of Satellite Remote Sensing — An Environmental Approach (2 nd Edition). CRC Press, Roca Raton.
6. Chaunial, D.D. (2016). Principles of Remote Sensing and Geographical Information System (In Hindi), Sharda Pustak Bhawan, Allahabad.
7. Scott, M. (2015). Global Navigation Satellite Systems and Their Applications. Springer, New York.
8. Heywood, I.; Cornelius, S. and Carver, S. (2011). An Introduction to Geographic Information Systems (4 th Edition). Pearson Education, New Delhi.
9. Longley, P.A.; Goodchild, M.; Maguire, D.J. and Rhind, D.W. (2010). Geographic Information Systems and Science (3rd Edition). John Wiley, New Jersey:
10. DeMers, M. (2009). Fundamentals of Geographic Information Systems (4th Edition). John Wiley, New Jersey.
11. Sabins, F.F. (2007). Remote Sensing: Principles and Interpretation (3rd Edition). Waveland Press, Long Grove.
12. Chang, K-t. (2006). Introduction to Geographic Information Systems. Tata McGraw Hills, New Delhi.
13. Lillesand, T.M.; Kiefer, R.W. and Chipman, J.W. (2004). Remote Sensing and Image Interpretation (5th Edition). John Wiley India, New Delhi.

PC-6			
Session:2024-25			
PartA–Introduction			
NameoftheProgramme	M.Sc. Geography		
Semester	III		
Name of the course	**PRACTICAL IN HUMAN GEOGRAPHY**		
CourseCode	M24-GEO-304		
CourseType	PC		
Levelofthecourse	500-599		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse, the learner will be able to:	• Understanding the processing of geographical data in SPSS. • Enhance the practical knowledge of bivariate techniques in SPSS. • Understand The tools of hypothesis testing in SPSS.		
Credits	Theory	Practical	Total
	0	4	4
TeachingHoursperweek	0	8	8
InternalAssessmentMarks	0	30	30
EndTermExamMarks	0	70	70
Max.Marks	0	100	100
ExaminationTime	3 Hours		

Part B- Contents of the Course

Instructions for Paper-Setter

Note for Paper Setters: The examiner shall set four questions. All questions are compulsory.

Distribution of Marks for Evaluation

Exercise=10x4=40 **FileRecord = 20** **Viva-voce= 10**

Practical's		ContactHours =120
Unit-I	Economic Indices: i. Indicators of Economic Development ii. Gravity Model iii. Cost benefit Analysis	30
Unit-II	Population and Development Indices: i. Population Projection methods a. Arithmetic Increase Method, b. Geometric Increase Method ii. Calculation of Arithmetic Density, Physiological Density and Agricultural Density.	30
Unit-III	Measures of Settlement i. Rank Size Rule ii. Nearest neighbor analysis.	30
Unit-IV	Calculation of Crop Concentration Index: Locational quotient method. Measure of inequality: lorenez curve, ginni coefficient. Calculation of agricutlral productivity.	30
Total hour		
Suggested Evaluation Methods		

Internal Assessment:30		EndTerm Examination:70	
➢ **Practicum**	**30**	➢ **Practicum**	**70**
• class participation:	10	Lab Exercise -40	
• Seminar/Demonstration/Viva-voce/Labrecords etc.:	20	Viva-Voce-10 File Record-20	

PartC-Learning Resources

Recommended Books/e-resources/LMS:

1. Majid, Hussain, M (2008): Systematic Agricultural Geography, Rawat Publications, Jaipur (India).
2. Singh, J. and Dhillon, S.S. (2006): Agricultural Geography, Tata McGraw-Hill Publishing Company Limited, New Delhi.
3. Shafi, M. (1984): Agricultural Productivity and Regional Imbalances: A Study of Uttar Pradesh, Concept Publishing Company, New Delhi.
4. Chandna, R.C. (2010) Population Geography, Kalyani Publisher.
5. Hassan, M.I. (2005) Population Geography, Rawat Publications, Jaipur
6. Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver & Boyd London.
7. Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication.
8. Jordan-Bychkov et al. (2006) The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York.

DSE-1(i)			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	III		
NameoftheCourse	**URBAN GEOGRAPHY**		
CourseCode	M24-GEO-305		
CourseType	DSE		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Understanding Urban Geography and Urbanization. • Urban Morphology and Spatial Models. • Functional Classification and Theoretical Approaches in Urban Geography. • Contemporary Urban Issues and Sustainable Development.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Urban Geography: definition, nature, scope, different approaches and urban settlement concept (town, cities, and metropolitan). Origin and growth of urban places, factors and stages of urban growth and change. Urbanization: definition, concept, trends and pattern of urbanization in the world with special reference of India.	15
II	Aspects of Urban space: urban morphology: concentric zone model, sector model and multiple nuclei model, City Region Relationship of influence or umland and Urban Sprawl. Rural-Urban Fringe: structural	15

	characteristics and its development.	
III	Functional classification of towns: by C. D Harris and H.J Nelson and Ashok Mitra. Central place theory of Christaller and Losch. Rank Size rule and Law of Primate City concept.	15
IV	Contemporary Urban issues and challenges: Slums, Crime, renewal, and Environmental Pollution. Urban development Policies and programs in India. The concept of sustainable development of cities.	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Hall, P. (2002). *Cities of tomorrow: An intellectual history of urban planning and design in the twentieth century*. Blackwell Publishing.
2. Harris, C. D., & Nelson, H. J. (1991). *Urban analysis: A global perspective*. University of Chicago Press.
3. Christaller, W. (1966). *Central places in southern Germany*. Prentice Hall.
4. Losch, A. (1954). *The economics of location*. Yale University Press.
5. Mitra, A. (2009). *Urbanization in India: Challenges and opportunities. Economic and Political Weekly*, 44(10), 11-15.
6. Sinha, S. (2018). *Urbanization and urban development in India: An overview. Indian Journal of Geography and Environment*, 8(2), 1-14.
7. UN-Habitat. (2020). *World cities report 2020: The future of cities*. Retrieved from https://unhabitat.org/world-cities-report

DSE-1(ii)			
Session:2024-25			
Part A-Introduction			
Name of Programme	M.Sc. Geography		
Semester	**III**		
Name of the Course	**POLITICAL GEOGRAPHY**		
Course Code	M24-GEO-306		
Course Type	CC		
Level of the course	400-499		
Pre-requisite for the course(if any)	N.A.		
Course Learning Out comes(CLO) After completing this course, the learner will be able to:	Students would be able to understand key concepts like state, nation, nationalism; understand the changing nature of modern state, challenges it is facing; the linkages of space and politics in terms of geopolitics and some of the issues of concern at the local level.		
Credits	Theory	Practical	Total
	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 Time	3hours	-	-

Part B –Contents of the Course

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Nature and scope of Political Geography; Perspectives: Political-Economy, World Systems, Place, and Globalization.	15
II	Concepts of Nation, State, Nation-State; Emergence and growth of territorial state; Globalization and the Crisis of the Territorial State; Forms of Governance: Unitary and Federal	15
III	Rise and Demise of German Geopolitics; Geopolitics in the post ColdWar World—S.B. Cohen's model of Geo-strategic and Geo political regions	15
IV	India as a regional power in South Asia; National and Regional political parties in India; Women as a marginalized section in Indian politics; Inter-state water disputes in India (special	15

	reference to SYL canal).			
Total Contact Hours				60
Suggested Evaluation Methods				
InternalAssessment:30			**EndTermExamination:70**	
➢ **Theory**		**30**	➢ **Theory:**	**70**
• Class Participation:		05	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:		10		
• Mid-Term Exam:		15		

Part C-Learning Resources

Recommended Books/e-resources/LMS:

10. Agnew, J.A. (1987), Place and Politics, Boston: Allen and Unwin.
11. Agnew, J.A. (1998), Geopolitics, London: Routledge.
12. Blacksell, Mark (2003), Political Geography, London: Routledge.
13. Flint, Collin and Taylor, P.J. (2011), Political Geography, New Delhi: Pearson.
14. Cox, Kevin R. (2008), The Sage Handbook of Political Geograph, New Delhi: Sage.
15. Dicken, Peter (2003), Global Shift, New Delhi: Sage.
16. Dikshit, R.D. (2000), Political Geography: The Spatiality of Politics, New Delhi: Tata McGraw Hill.
17. Dodds, Klaus (2007), Geopolitics, New York: Oxford University Press.
18. Gallaher, Carolyn et.al. (2009), Key Concepts in Political Geography, New Delhi: Sage.
19. Jones, Martin, Rhys Jones and Michael Woods (2003), An Introduction to Political Geography, London: Routledge.
20. Khor, Martin (2001), Rethinking Globalization, London: Zed Books.
21. Nash, Kate (2000), Readings in Contemporary Political Sociology, Oxford: Blackwell.
22. Painter, J. (1995), Politics, Geography and Political Geography, London: Arnold.

DSE-1(iii)			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	III		
NameoftheCourse	**REGIONAL PLANNING & DEVELOPMENT**		
CourseCode	M24-GEO-307		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwil lbeable to:	The students will learn about the basic principles of regional planning. The students will study the regional planning process's different theoretical backgrounds and structures.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Regional Concept in Geography and its application to Planning . Basic Principles and Objectives of Regional Planning. Types of Region: Formal & Functional, Uniform & Nodal, Single Purpose & Composite Region. Methodologies and Techniques of Regional Planning .	15
II	Theories and models of the regional development: Hirschman's model. Growth centers and Growth pole theory of Perroux. Rostow's Model of Growth and Development. Gunnar Myrdal Model of Cumulative Causation.	15
III	Planning Regions of India (Macro, Meso & Micro). Regional Planning in India through Five Year Plans. Area Development Programmes for Tribal, Hilly, Drought Prone, Desert and Border Areas. Panchayati Raj	15

	Institutions, Multi-level Planning, Decentralized Planning.	
IV	Regional Development in India: Problems and Prospects. Concept and Indicators of Development, Levels of Regional Development and Disparities in India. Case Studies: Regional Planning in USA (TVA) and Regional Planning in India (DVC). Environmental Issues in Regional Planning and Development.	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Mishra. R. P. (1992). Regional planning: concepts, techniques, policies and case studies.
2. Bhat. L. S. (1972) Regional planning in India.
3. Chaudhary. J.R. (2001) Introduction to Development and Regional Planning: With Special Reference to India.
4. Mishra. J. Sinha. C. (1985) Planning and regional development in India.
5. Prasad B.K. (2005) India's development agenda: issues, challenges and policies.
6. Nath V. Aggarwal S.K. (2009) (Edited), Regional Development and Planning in India selected Essays Concept Publishing Company.
13. Glasson John and Marshall Tim, 2007. Regional Planning, Taylor and Francis, London and New York.
15. Kulshreshta S. K. 2012. Urban and Regional Planning in India: A Handbook for Professional Practice, Sage, Newm Delhi.
16. Lichfield N., Kettle P. and Whitbread M. 2016. Evaluation in the Planning Process: The Urban and Regional Planning Series (Volume 10), Elsevier. .
18. Stiftel B. and Watson V. 2005. Dialogues in Urban and Regional Planning, Psychology Press.
19. Siddhartha, K., Models in Regional Planning, Kasalaya Publications, New Delhi, 2008.
20. Siddhartha, K., Regional Planning of India, Kasalaya Publications, New Delhi, 2007.
21. Singh, R.L., India- A Regional Geography, National Geographical Society of India, Varanasi, 2003.

DSE-2(i)			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	III		
NameoftheCourse	**POPULATION GEOGRAPHY**		
CourseCode	M24-GEO-308		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Understanding Population Geography Concepts and Methodology • Analysis of Population Dynamics and Growth Theories • Evaluation of Migration Theories and Population Planning • Assessment of Contemporary Population Issues and Policies		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Concepts, Scope and Methodology of Population Geography; Demography and Population Geography, Sources of Population Data. Population Dynamics: Growth, fertility and mortality measurement. Factors affecting Population distribution, density and growth.	15
II	Theories of Growth: Malthusian Theory, Social Capillarity and Demographic Transition Theory. Optimum Theory of population – Carr Saunders and its criticism. Migration: Types, determinant and consequences. Theories of Migration: Zelinsky, Ravenstein and Lee's Laws.	15

III	Population Planning: Population Distribution and Characteristic; Population Policy: Developed and Developing Countries, India's Population Policy; Demographic Dividends.	15
IV	Population Issues- Ageing, Disability and Women; Population and Resource; Digital Divide and Inequality, Population in the context of environmental crises.	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Bhende, A.A. &Kanitkar, (2014), Principles of Population Studies, Himalayan Pub. H., Mumbai,
2. Bogue, D. J., Principles of Demography, New York, 1969.
3. Clarke, J.I. Population Geography, Oxford, 1981.
4. Coontz, S.H.Population Theories and the Economic Interpretation.
5. Garnier, B.J., Geography of Population, Longman Group Limited, London, 1966.
6. Jones, H,R., A Population Geography, London, 1981.
7. Jhingan M.L. Bhatt B.K. and Desai, J.N. Demography, Vrid Pub. Delhi, 2006.
8. Khan, J.H. Socio-Economic and Structural Analysis of Internal Migration, New Delhi, 2010.
9. Maurya, S.D.: Population Geography, Pravalika Publication, Allahabad, 2018
10. Newbold, K. Bruce, Population Geography, Rawat Publications, 2017.
11. Siddiqui. F.A. Regional Analysis of Population Stsructure, new Delhi, 1984.
12. Smith, T., Fundamentals of Population Study, New York, 1960.
13. Trewartha, G.T., A Geography of Population: World pattern, New York, 1969.
14. United Nations, The Determinants and Consequences of Population Trends, Population Studies, 17 Un, New York, Revised Edition.
15. White. P. and Wood. R. The Geographical Impact of Migration, Longman, Inc, New York, 1980.
16. Wood, R. Population Analysis in Geography, Longman, London, 1979.
17. Zelinsky, W. A Prolong to Population Geography, Prentice Hall, New Jersey, 1966.

DSE-2(ii)			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	III		
NameoftheCourse	**GEOGRAPHY OF TRANSPORTATION**		
CourseCode	M24-GEO-309		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• familiarization with the fundamentals of transport geography • understand the types of tourism and their trend • acquaintance with tourism infrastructure and its impact • provide awareness of the carrying capacity of tourism destinations		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Nature, scope, significance and development of transport geography. Factors associated with the development of transport system; economic, social, cultural and institutional. Impact of transport infrastructure on economic and regional development.	15
II	Characteristics and relative significance of different modes of transport: railways, roads, airways, and waterways, pipelines, etc. Structure measures- network structure, measurement of accessibility and connectivity.	15
III	Bases of spatial interaction, complementarities, intervening opportunities and transferability (model of ulmann).Patterns of movement: the type,	15

	patterns of movement and transport modes. Transport network; the function, pattern of movement, geometry and transport development.	
IV	Transport policy and planning in India. Urban transport: growth and problem of urban transportation. Environmental degradation: vehicular pollution and congestion alternatives to the transport system in mega cities in India. National highway development and planning in India.	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Bomford,C.G.and Robinson, H. 1978. Geography of transport. Macdonald and Evans, London.
2. Bhaduri, S. 1992. Transport and Regional development, Concept, New Delhi.
3. Chorley R.J. &Hagett P. 1967. Models in Geography Methuen & Co. London.
4. Hurst, M.E.(ed.) 1974. Transportation Geography, McGraw-Hill.
5. Hagget, F and Chorlley, R.J. 1968. Network Analysis', Edward Arnold, London.
6. Hay, A. 1973. Transport Economy, MacMillan, London.
7. Hoyle, B.S.(ed). 1973. Transport and Development, MacMillan, London.
8. Mukerji, A.B. 1974. 'Road Transportation Network Structure and Levels of Urbanization in Rajasthan, *The National Geographical Journals of India,* Vol. XX, Part I.
9. Oni, A. O. 2007. A Study of Accessibility and Connectivity of Lkeja Arterial Roads. *Journal of Land Use and Development Studies,* Vol. 3, 1.
10. Raza, M. and Agrawal Y.P. 1985. Transport Geography of India, Concept, New Delhi.
11. Robison H & Bamford C.G. 1978. Geography of Transport Machdonals& Evans. London.
12. Saxena, H.M. 2005. 'Transport Geography', *Rawat Publications*, Jaipur.
13. Taffe, E.J. & Gauthier (Jr.) H.L. 1973. Geography of Transportation, Prentice-Hall, Englewood Cliffs, N.J.
14. Ullman E.L. 1957 American Commodity Flow University of Washington Press.

White H.P. and Senior, M.L. 1983. Transport Geography, Longman, London.

DSE-2(iii)			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	III		
NameoftheCourse	**GEOGRAPHY OF TOURISM**		
CourseCode	M24-GEO-310		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	The students will achieve a comprehensive understanding of tourism geography, impacts, planning and development strategies, sustainability practices, global influences, and the specific context of the Indian tourism industry, with a focus on Haryana.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Definition, nature scope and significance of Geography of Tourism, Types of Tourism, Geographical basis of Tourism: Relation between Geography and Tourism, Factors affecting Tourism, Elements of Tourism, Tourism as an industry.	15
II	Impact of tourism: Physical, economic, social and cultural, Perceptional. Concept of eco-tourism and Sustainable tourism. New trends in Tourism, Globalization and Tourism.	15
III	Tourism planning and development: Concept and issues, Strategic tourism planning, Infrastructure and support system, Role of accessibility in the development of Tourism industry, Evaluation of Tourism potential	15

	and Environmental laws.	
IV	Indian Tourism Industry: Regional dimensions in India, The organization of Tourism, Government policies for planning and promotion of Tourism in India with special reference to Haryana.	15
TotalContactHours		60

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Hall, C. M., & Page, S. J. (2009). The geography of tourism and recreation: Environment, place, and space (4th ed.). Routledge.
2. Williams, S. (2012). Tourism geography: Critical understandings of place, space and experience. Routledge.
6. Gössling, S., & Hall, C. M. (Eds.). (2013). Tourism and global environmental change: Ecological, social, economic and political interrelationships. Routledge.
7. Higham, J., &Lück, M. (Eds.). (2008). Marine wildlife and tourism management: Insights from the natural and social sciences. CABI Publishing.
8. Honey, M. (2008). Ecotourism and sustainable development: Who owns paradise? (2nd ed.). Island Press.
11. Inskeep, E. (1991). Tourism planning: An integrated and sustainable development approach. Van Nostrand Reinhold.
12. Papatheodorou, A. (2006). Tourism and development in the Mediterranean: A sustainable perspective. Routledge.
13. Mowforth, M., & Munt, I. (2015). Tourism and sustainability: Development, globalisation and new tourism in the Third World (4th ed.). Routledge.
14. Tribe, J. (2011). The economics of recreation, leisure and tourism (4th ed.). Routledge.
15. Butler, R. W., & Boyd, S. W. (2012). Tourism and the environment: A geographical perspective. Routledge.
16. Bhattacharya, D., & Palmer, R. (2004). India: The emerging giant. Oxford University Press.

OEC			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	**III**		
NameoftheCourse	**GEOGRAPHY OF INDIA**		
CourseCode	M24-GEO-311		
CourseType	**OEC**		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Comprehension of Physiographic Divisions of India • Analysis of India's Climate and Drainage Systems • Evaluation of Key Industries: Iron & Steel and Cotton Textile • Assessment of Population Distribution, Density, and Growth in India		
Credits	Theory	Practical	Total
	2	0	2
TeachingHoursperweek	2	0	2
InternalAssessmentMarks	15	0	15
EndTermExamMarks	50	0	50
Max.Marks	50	0	50
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Physiographicdivisionsofhdia Climate of India. Drainage system of India.	15
II	Industries: iron & steel and cotton textile. Population of India: distribution, density and growth.	15
	TotalContact Hours	30

SuggestedEvaluationMethods

InternalAssessment:15		**EndTermExamination:35**	
➢ **Theory**	**15**	➢ **Theory:**	**35**

• ClassParticipation:	4	WrittenExamination:35
• Seminar/presentation/assignment/quiz/class testetc.:	4	
• Mid-TermExam:	7	

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Dubey,R.N.,1974:EconomicGeographyofIndia,KitabMahal,Allahabad
2. HussainMajid.,2015:GeographyofIndia, McGrawHillEducation.
3. Joshi,H.L.,1990:IndustrialGeographyofIndia,RawatPublications,Jaipur
4. Nag,P.andSengupta,S.,1992:GeographyofIndia,Conceptpublications.Co.,NewDelhi.
5. Singh,R.L.:India:ARegionalGeography,N.G.S.I.,Varanasi,1971
6. Sharma,T.C.and Coutinho,O.1988:EconomicandCommercialGeographyofIndia.VikasPublishing HousePvt.Ltd, NewDelhi.
7. Singh,S.andSaroha,J.2019.GeographyofIndia.McGrawHillEducation.
8. Tiwari,R.C.:GeographyofIndia,PrayagPustakBhawan,Allahabad.

CC-11			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	**OCEANOGRAPHY**		
CourseCode	M24-GE O-401		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Understanding Major Topographic Features of Ocean Basins • Analysis of Ocean Temperature, Salinity, and Circulation • Comprehension of Hydrology and the Hydrological Cycle • Assessment of Groundwater Occurrence and Movement.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Definition, nature and scope of Oceanography. Major topographic features of ocean basins, bottom relief of Atlantic, Pacific and Indian oceans.	15
II	The heat budget of ocean-Distribution of temperature and salinity. coral reefs-origin and distribution Theories of the origin of coral reefs (Subsidence and standstill.	10
III	Ocean water: circulation, factors affecting ocean currents, currents in Atlantic, Pacific & Indian Ocean.Man & Oceans: Oceans as a store house of Minerals &	15

	Food resources.	
IV	Wegner's drift hypothesis, and sea floor spreading and Plate Tectonics.sea-level changes; evidences, mechanism and impact; maritime laws	20
TotalContactHours		60

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Chorley R.J. (1967) : Introduction to geographical Hydrology, Methuen, London.
2. Dakshinamarthy C. etal (1973) : Water resource of India & their utilization in Agriculture, Indian Agricultural Res. Inst. New Dehli.
3. Eskstein O. (1965) : Water Resource Development, harvard University Press, Cambridge, Mass.
4. Facon R. (1963): The Problem of Water- A world survey, Faber & Faber.
5. International Water Resource Association & Central Board of Irrigation & Power. (1975).
6. Water for Human needs wol. II, III, IV & V, proceedings of the second world congress on waters resource 1-b-Dec. New Dehli.
7. Sing R.A. & Singh S.R. (1979) : Water management, Principles & Practices, Tara Publication, Varanki.
8. Todd D.K. (1959) :Ground Water Hydrology, John Wiley, New York.
9. Negi, S.S. (1994) : Geographical Science & Water Resource Management, Printwell Jaipur (India)
10. Joseph W & Howard P : Introductory oceanography, McGraw Hill, Lognkusha, Ltd. New Delhi. (International Student Education)
11. Peter K. W. (1970): Oceanography: An Introduction to the marine Environment, John Wiley & Sons Inc. New York.
12. Sharma R.C. (1970) : Oceanography for Geographers, Chaitanya Publishing House, Allahabad.
13. Negi B.S. (1994-95) : Climatology & Oceanography, KedarnathRamanathMeerat, New Delhi.

CC-12			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	**SOCIAL & CULTURAL GEOGRAPHY**		
CourseCode	M24-GEO-402		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Understanding Concepts and Scope of Social Geography • Analysis of Social Identities and Issues in India • Comprehension of Cultural Geography and Its Evolution • Assessment of Cultural Dynamics and Landscape Evolution		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Concepts, Nature and Scope; Development of Social Geography, Concepts of Social Space; Relevance of Social Geography. Social Identities in India: Ethnicity, Tribes, Caste and Religion; Mother Tongues and Language Shifts in India; Social Issues in India.	15
II	Definition, Evolution and Development of Cultural. Geography; Place of Cultural Geography within. Geography; Cultural Area.	15
III	Cultural Region; CulturalHearth; Cultural Realm and Regions of the World; Landscape and Environment, Planning and Policies for Multi-Culturalism, The contribution of Otto Schluter and Carl Sauer.	15
IV	Landscape Evolution; Cultural Diffusion; Adaptation. Acculturation;	15

	Assimilation; and Resistance/ Cultural Resilience.A general account of the cultural geography of Haryana. Humankind is a geomorphic and biotic agent.	
TotalContactHours		60

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Agnew, J. A. (1998). *Geography as social science: A critical introduction.* University of Chicago Press.
2. Blunt, A., & Dowling, R. (2006). *Social geography: A critical introduction.* SAGE Publications.
3. Gupta, A. (2000). *Cultural geography in India: An overview*. *GeoJournal*, 50(1), 1-9. https://doi.org/10.1023/A:1004171105597
4. Harris, C. D., & Nelson, H. J. (1991). *Urban analysis: A global perspective*. University of Chicago Press.
5. Massey, D. (2005). *For space*. SAGE Publications.
6. Sauer, C. O. (1963). *The Morphology of Landscape*. In J. Leighly (Ed.), *Landscapes in the American West* (pp. 315-350). University of California Press.
7. Schluter, O. (1918). *Die KulturellenLebensräume*. *GeographischeZeitschrift*, 24(1), 1-12.
8. Singh, R. B. (2010). *Cultural geography of India: A regional perspective*. *Indian Geographical Journal*, 85(1), 15-26.
9. Tuan, Y. F. (1977). *Space and place: The perspective of experience*. University of Minnesota Press.
10. Williams, R. (1973). *The country and the city*. Oxford University Press.

PC-7			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	**GEOGRAPHICAL INFORMATION SYSTEM**		
CourseCode	M24-GEO-403		
CourseType	PC		
Levelofthecourse	500-599		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• understand the basics of Geographic Information System. • enrich skills about functioning of GIS. • understand the tools used in GIS. • acquire knowledge about application of GIS.		
Credits	Theory	Practical	Total
	0	4	4
TeachingHoursperweek	0	4	4
InternalAssessmentMarks	0	30	30
End-TermExamMarks	0	70	70
Max.Marks	0	100	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter

The examiner shall set four questions. All questions are compulsory.

Distribution of Marks for Evaluation

Exercise = 10x4 = 40 **File Record = 20** **Viva-voce = 10**

Unit	Topics	ContactHours
I	Introduction to SAGA and QGIS software. Projection and re-projection in QGIS.	30
II	Geo-referencing of toposheet in SAGA and QGIS. Image to image registration in SAGA and QGIS. Generation of Geo-database/shape files.	30
III	Vectorization of data (point, line and polygon).Joining of spatial and non-spatial data. Symbolization: Chorochromatic, choropleth and point proportional	30
IV	Queries in QGIS: Spatial and Non-spatial data based. Hands on training of GPS and DGPS.	30
TotalContactHours		120

SuggestedEvaluationMethods	
InternalAssessment:30	**EndTermExamination:70**

➢ **Practicum :**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	10	**Practicum : 70 Marks**	
• Seminar/presentation/assignment/quiz/class testetc.:	20	Exercise:40 Viva-voce:10 File record:20	
PartC-LearningResources			
RecommendedBooks/e-resources/LMS: 1. https://dst-iget.in/understanding-gis/			

PC-8			
Session:2024-25			
Part A–Introduction			
NameoftheProgramme	M.Sc. Geography		
Semester	IV		
Name of the course	**PRACTICAL IN TOURISM MANAGEMENT**		
CourseCode	M24-GEO-404		
CourseType	PC		
Levelofthecourse	500-599		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse, the learner will be able to:	• Evaluate and assess the suitability of potential tourism sites based on their natural, cultural, and infrastructure attributes. • Develop the ability to design and implement comprehensive marketing campaigns • Utilizing online travel booking systems, including making reservations, managing itineraries, and understanding the ticket booking and cancellation processes.		
Credits	Theory	Practical	Total
	0	4	4
TeachingHoursperweek	0	8	8
InternalAssessmentMarks	0	30	30
EndTermExamMarks	0	70	70
Max.Marks	0	100	100
ExaminationTime	3 Hours		

Part B- Contents of the Course

Instructions for Paper-Setter

Note for Paper Setters: The examiner shall set four questions. All questions are compulsory.

Distribution of Marks for Evaluation

Exercise=10x4=40 **File Record = 20** **Viva-voce= 10**

Practical's		**Contact Hours =120**
Unit-I	Assess a potential tourism site	30
Unit-II	Data analysis of Tourist arrivals, hotel occupancy rates, or tourism expenditure. Generate reports, create visualizations, data analysis.	30
Unit-III	Develop promotional materials such as brochures, posters, and social media content. Design a tour package for market.	30
Unit-IV	Organize a field trip to a tourism-related business such as a hotel, travel agency, or tourist attraction. Prepare a report	30

	summarizing their observations.			
Total hour				
Suggested Evaluation Methods				
Internal Assessment:30			**EndTerm Examination:70**	
➢ **Practicum**		**30**	➢ **Practicum**	**70**
• class participation:		10	Viva-Voce-50	
• Seminar/Demonstration/Viva-voce/Labrecords etc.:		20	File Record-20	

PartC-Learning Resources

Recommended Books/e-resources/LMS:

1. Anil Kumar (2012) "Hospitality and Tourism Management" (Excel Books)
2. Arch G. Woodside (2008) "Tourism Management: Analysis, Behaviour and Strategy" (Publisher: CABI)
3. C. R. Goeldner (2007) "Tourism: Principles, Practices, Philosophies" (Wiley)
4. Chris Cooper (2017) "Tourism Principles and Practice" (Pearson Education)
5. David Airey and John Tribe (2006) "Tourism and Destination Management" (Sage)
6. Devesh Nigam (2008) "Tourism Planning and Tour Operation" (Shree Publishers)
7. DimitriosBuhalis (2022) 'Encyclopedia of Tourism Management and Marketing" (Edward Elgar Publishing)
8. Jennifer Raga (2017) "Hospitality and Tourism Management Trends, Challenges and Innovations" (Society Publishing)
9. John Beech and Simon Chadwick (2006) "The Business of Tourism Management" (Pearson Education)
10. K.V. Rao (2014) "Tourism Planning and Development" (Sterling Publishers Pvt. Ltd.)
11. Manoj Dixit (2020) "Tourism Management" (Oxford University Press India)
12. Meenakshi Gupta (2019) "Tourism: Principles and Practices" (VK Global Publications Pvt. Ltd.)

DSE-3(i)			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	**DISATER MANAGEMENT**		
CourseCode	M24-GEO-405		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• understand the meaning of hazard and its approaches and classification. • acquire knowledge about various fundamental concepts of hazard including technological interventions in the field. • develop an awareness regarding management of common hydrological hazards occurring in and around. • develop an understanding about the consequences and management of frequently occurring man-made hazards.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Risk, Hazard and disasters: definition and distinction. Hazards: classification and dimensions. Disaster effects and impacts (physical and social).	15
II	Disaster vulnerability: definition, types, measures and affecting factors. Disaster risk assessment and management. Disaster cycles: mitigation measures and preparedness..	15
III	Desertification: causes, assessment, effects and control measures. Sea level change: cause, consequence, projections and control measures.	15

	Technological hazards: nature, theories and practice, perception, mitigation, protection and adaptation.	
IV	Disaster risk reduction framework: Sandai. Disaster management in India: strategies, policies and organization structure setup. Geospatial technology applications in disaster prevention and monitoring,	15
TotalContactHours		60

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

2. Alexander, D. (1993): Natural Disasters, Springer, Berlin.
3. Carter, N.W. (1991): Disaster Management: A Disaster Manager's Handbook, ADB, Manila.
4. Coch, N.K. (1994): Geohazards: Natural and Human, Pearson, New Delhi.
5. Cooke, R.U.andDoornKamp, J.C. (1974) Geomorphology in Environmental Management: An Introduction, Clarendon Press, Oxford.
6. Cuny, F.C. (1983): Disasters and Development, Oxford University Press.
7. Cutter, S.L. (2006): Hazards Vulnerability and Environmental Justice, Routledge, London.
8. Gupta, H.K. (2013): Disaster Management, University Press, New Delhi.
9. Hewitt, K. (1977): Regions of Risk: A Geographical Introduction to Disasters, Longman, Harlow.
10. Husky, T. (2012): Encyclopedia of the Hazardous Earth, Viva Books, New Delhi.
11. Kapur, A. (2010): Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
12. Modh, S. (2010): Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, New Delhi.
13. National Policy on Disaster Management, (2009): Ministry of Home Affairs, Govt. of India, New Delhi.
14. Nlaikie, P. (1994): At Risk: Natural Hazards, People's Vulnerability and Disasters, Routledge, London.
15. Paul, B.K. (2011): Environmental Hazards and Disasters-Context, Perspectives and Management, Wiley-Blackwell, Chichester, West Sussex, UK.

DSE-3(ii)			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	**HYDROLOGY AND WATER RESOURCE MANAGEMENT**		
CourseCode	M24-GEO-406		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• provide knowledge about water resource geography. • understand the uses of water in different sectors. • understand the computation of water demand. • provide awareness about watershed management.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Definition, nature, scope and historical development of hydrology. Relationship of hydrology with other physical sciences. Hydrological cycle, estimation of global water budget, human impact on hydrological cycle.	15
II	Surface Water Hydrology: River Basin and problems of regional hydrology. Streams flow hydrograph, streamflow measurement, rainfall-runoff relationship. Surface water resources of India.	15
III	Groundwater Hydrology: Type of aquifer and aquifer properties. Darcy's law and elementary groundwater flow equation. Geological formation of aquifers and estimation of groundwater resource of India.	15

IV	Contemporary Issues and Challenges: Drought, flood, water use conflicts. Water resource planning, management and Policy: Water resource management (demand and supply side), watershed management, water harvesting and National Water Policy.	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Andrew, D. W. and Trimble, S. 2004. Environmental Hydrology, 2nd Edition, Lewis Publishers,CRC Press.
2. Beek, E., Loucks, P.D. 2005. Water Resource Systems Planning and Management: An
3. Introduction to Methods, Models and Applications, UNESCO, Paris.
4. Bhattacharya, S.K. 1988. Urban Domestic Water Supply in Developing Countries, CBS
5. Publishers, CR Distributors, Delhi.
6. Chow, V.T., Maidment, D.R. and Mays, W.L. 1988. Applied Hydrology, McGraw-Hill
7. International Editions, McGraw-Hill Book Company, New York.
8. Beach, Tim and Jonathan, M.F. 2017. Wetland Hydrology: The International Encyclopaedia of Geography, Wiley Online Library.
9. Jain, S.K., Aggarwal, P.K. and Singh, V.P. 2007. Hydrology and Water Resources of India Springer, The Netherlands. Karanth, K.R. 1988. Groundwater: Exploration, Assessment and Development, Tata-McGraw Hill, New Delhi.
10. Mahajan G. 1989. Evaluation and Development of Groundwater, Ashish Publishing House, New Delhi.
11. Micklin, Philip, P. 1996. Man and the water cycle: challenges for the 21st century, Geojournal, 39 (3): 285-298.
12. Rai, S.C. 2017. Hydrology and Water Resources: A Geographical Perspective, Ane Book Pvt. Ltd., New Delhi.
13. Singh, V.P. 1995. Environmental Hydrology, Kluwar Academic Publications, The Netherlands.
14. Subramanya, K. 2010. Engineering Hydrology, Tata McGraw Hill Education Pvt. Ltd. New Delhi.

DSE-3(iii)			
Session: 2024-25			
Part A – Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	**TROPICAL CLIMATOLOGY**		
CourseCode	M24-GEO-407		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Enhance the knowledge about atmospheric constituents in tropical areas. • Develop scientific understanding about climatic elements and their characteristics in tropical areas. • Sharpen the understanding about weather system in tropical areas. • Enrich the knowledge about climatic classification, climate change and global warming.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Nature, scope and significance of Tropical Climatology. Energy balance in tropical areas. Temperature distribution in tropical areas.	15
II	Atmospheric pressure and circulation in tropical area-Hadley Cell. Walker circulation and ENSO. Monsoon-theories of origin and	15

	characteristics and areas of influence.	
III	Tropical cyclones-origin and characteristics. Tropical rainfall-dynamics and distribution. Heavy precipitation events in tropical areas.	15
IV	Tropical climates: classification and characteristics. Tropical climates and agriculture: human adaptation to tropical climates. Impact of global warming on tropical climates and biomass	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Barry, RF and RJ Chorley (1998) Atmosphere, Weather and Climate, Routledge, London.
2. Chritchfield, HJ, General Climatology.
3. Das PK (1987) The Monsoons, NBT Publications, New Delhi.
4. Fein JS and PM Stephens (1987) Monsoons, Wiley Intersciences.
5. Koenigsberger O H and others, Manual of Tropical Housing and Buildings, Universities Press
6. McGregor, GR and Simon Nierswold (1998) Tropical Climatology: An introduction to the Climates of the Low Latitudes, Wiley Interscience.
7. Parenti, C (2011) Tropic of Chaos: Climate Change and New Geography of Violence, Nation Books, New York
8. Robinson PJ and S Henderson (1999) Contemporary Climatology, Henow.
9. Thompson, RD and A Perry (Ed.) (1997): Applied Climatology, Principles and Practices, Routledge, London.
10. Trewartha, GT. An Introduction to Climate. McGraw Hill Company, New York, 1980.

DSE-4(i)			
Session:2024-25			
Part A–Introduction			
Name of Programme	M.Sc. Geography		
Semester	**IV**		
Name of the Course	**ENVIRONMENTAL GEOGRAPHY**		
Course Code	M24-GEO-408		
Course Type	CC		
Level of the course	400-499		
Pre-requisite for the course (if any)	N.A.		
Course Learning Outcomes (CLO) After completing this course, the learner will be able to:	• The Students will learn the importance of conserving biodiversity to maintain ecological balance. • Understand the nature of environmental pollution and causes of environmental degradation. • Status of biodiversity conservation in general and particular in India.		
Credits	Theory	Practical	Total
	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 Time	3hours	-	-

Part B-Contents of the Course

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Environmental Geography: Nature and scope of environmental geography, fundamental concepts of environmental geography; Approaches and methods in Environmental Geography; Relationship with other branches of knowledge,	15
II	Mountain Ecosystems: Mountain ecology, risks and vulnerabilities, highland-lowland interactive systems.	15
III	Environmental pollution- meaning, types, sources, causes and impacts; Air, Water and Land pollutions; Environmental Degradation – Nature, process, types and causes of environmental	15

	degradation; Green house effect, Global warming, Ozone depletion and Desertification	
IV	Concepts, Types and Distribution of Biodiversity, Biogeographically Classification of India, Deforestation and Man - Animal Conflicts in India, Major Environmental Policies and Programme in India	15
	Total Contact Hours	60

Suggested Evaluation Methods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• Class Participation:	05	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/ class test etc.:	10		
• Mid-Term Exam:	15		

Part C- Learning Resources

Recommended Books/e-resources/LMS:

1. Anderson J.M. (1981): Ecology for Environmental Science : Biosphere, Ecosystems and Man, Arnold, London.
2. Awasthi, N.M. and Tiwari, R.P.L. (1995) :ParyavaranBhugool (Environmental Geography), Madhya Pradesh Hindi Granth Academy, Bhopal.
3. Goudie, Andrew (1984) : The Nature of the Environment, Oxford Katerpring Co. Ltd.
4. Nobel and Wright (1996) : Environmental Science, Prentice Hall, New York.
5. Odum, E.P. (1971) : Fundamental of Ecology, W.B. Sanders, Philadelphia.
6. Saxena, H.M. (1994) :PrayavaranevnParisthitikiBhugool (Geography of Environment and Ecology) Rajasthan Hindi Granth Academy, Jaipur.
7. Singh, Savinder (1991) : Environmental Geography, PrayagPustakBhawan, Allahabad.
8. Singh, R.B. (ed.) (1989) : Environmental Geography, Heritage, New Delhi.
9. Strahler, A.N. and Strahler, A.H. (1973) : Environmental Geosciences : Interaction between natural systems and Man,John Wiley and Sons, New York.
10. Strahler, A.H. and Strahler A.N. (1977) : Geography and Mans Environment, John Wiley, New York.
11. William, M.M. and John, G. (1996) : Environmental Geography - Science, Landuse and Earth System, John Wiley and Sons, New York

DSE-4(ii)			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	**FUNDAMENTALS OF SOIL GEOGRAPHY**		
CourseCode	M24-GEO-409		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Understand the concepts and principles of soil formation. • Study the role of essential nutrient for plant growth and development. • Determine the physical and chemical properties of soils. • Enable the students to realize the Soil and environmental problems; • Know the significance of soil conservation and methods of Soil reclamation.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Introduction to soil geography: Concepts and definitions, Process of origin of soil, pedogenesis, soil profile and categories of soil taxonomy-major groups. Soil forming processes and factors, Weathering and soils, Soil as a medium for plant growth, Essential nutrient elements, Plant roots and soil relations. Soil fertility and soil productivity.	15
II	Physical properties of soil: Soil morphology, Soil texture, Soil Structure; Genesis and Types of structure, Soil consistence, Soil:- moisture, colour, porosity and permeability; Effects of tillage on structure and porosity.	15
III	Chemical properties of soil: chemical composition of soils, Ion exchange,	15

	Cation exchange, Determination of soil pH, Management of soil pH, Soil clays, humus, organic matter, and NPK.	
IV	Soil and environmental problems: Classification of tropical soils, Soil erosion, Universal soil loss equation (USLE), Nature and management of saline and sodic soils. Soil Contamination, Micronutrients and Toxic Elements in soils: Iron, manganese, Copper and zinc. Conservation of soil,Methods of Soil reclamation.	15
TotalContactHours		60

SuggestedEvaluationMethods			
InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

Miller, R. W. and Donahue, R. L. **(1992):** Soils: An Introduction to Soils and Plant Growth, Prentice-Hall of India, New Delhi

2. **Brady, N. C.,** and Weil, R. R. **(2008):** The Nature and Properties of Soils, Prentice Hall, New Jersey

3. **Pitty, A. F. (1978):** Geography and Soil Properties, Methuen and Co., London

4. **Bridges, E. M.** and Davidson, D. A. **(1982):** Principles and Applications of Soil Geography, Longman Group, London

5. **Daji, J. A. (1970**): A Textbook of Soil Science, Asia Publication House, New York

6. **Birkeland, P. W (1999):** Soils and Geomorphology, Oxford University Press, New York

7. **Backman, H.O** and Brady, N.C. **(1960),** The Nature and Properties of Soils, McMillan, New York.

8. **Bennet, Hugh H.** , Soil Conservation, McGraw Hill, New York.

9. **De, N.K.** and Ghos, P. **(1993):** India: A Study in Soil Geography, Sribhumi Publishing Co., Calcutta.

10. **Russell,** Sir Edward J. **(1961),** Soil Conditions and Plant Growth, Wiley, New York

DSE-4(iii)			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	**GEOGRAPHY OF HARYANA**		
CourseCode	M24-GEO-410		
CourseType	CC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	• Comprehensive Understanding of Haryana's Physical Geography. • Insight into Natural Resources and Their Management. • Comprehensive View of Human Resources and Demographic Trends. • Awareness of the state's rich cultural heritage, including festivals.		
Credits	Theory	Practical	Total
	4	0	4
TeachingHoursperweek	4	0	4
InternalAssessmentMarks	30	0	30
End-TermExamMarks	70	0	70
Max.Marks	100	0	100
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Haryana – An introduction; Physical setting – Location, size and extent; Geological history; Origin; Relief features, climate, soils, drainage and natural vegetation, Natural Resources	15
II	Agriculture: Major Crops and Cropping Pattern. Problems and Prospects, Influencing Factors, Irrigation, Regional Disparities.agriculture marketing, problems of agriculture-groundwater depletion, and lack of agro-biodiversity.	15
III	Industries: Major Industrial Belts / Pockets and Distribution Problems and Prospects of Industrialization.	15

	Trade and Transportation: Agro-based Goods & Their Trading Industrial Produces & Their Trading Transport Network	
IV	Human Resources- distribution of Population, population density, male-female ratio,workforce, dependency ratio,Growth & Comparative Proportion Trend of Urbanization, Cultural regions characteristics and Distribution.	15
TotalContactHours		60

SuggestedEvaluationMethods

InternalAssessment:30		**EndTermExamination:70**	
➢ **Theory**	**30**	➢ **Theory:**	**70**
• ClassParticipation:	5	WrittenExamination:70	
• Seminar/presentation/assignment/quiz/class testetc.:	10		
• Mid-TermExam:	15		

PartC-LearningResources

RecommendedBooks/e-resources/LMS:

1. Census of India. (2011). Provisional Population Totals. Office of the Registrar General & Census Commissioner, India.
2. Datta, A. (2006). Globalization and Economic Transformation in India. Concept Publishing Company.
3. Haryana Economic Survey. Government of Haryana. (Available at Haryana Government Economic Surveys)
4. Haryana State Industrial and Infrastructure Development Corporation. Annual Report. Government of Haryana. (Available at HSIIDC Annual Reports).
5. Hooda, S. (2015). Haryana: Cultural Traditions and Contemporary Perspectives. Blue Rose Publishers.
6. Khullar, D. R. (2012). India: A Comprehensive Geography. Kalyani Publishers.
7. Malik, S. C. (1994). Folklore of Haryana. National Book Trust, India.
8. Sihag, R. C. (2002). Traditions and Customs of Haryana. Shubhi Publications.
9. Singh, J. (1976). Agricultural Geography of Haryana. Vishal Publications.
10. Singh, J. (2010). India's Urbanization, 1901-2001. Concepts Publishing Company.
11. Singh, Jasbir. (1976). Agricultural Geography of Haryana. Vishal Publications.
12. Singh, R. (2007). Haryana: Cultural and Ethnic Diversity. Rawat Publications.
13. Singh, R. L., & Singh, R. P. B. (1978). Geography of India. National Geographical Society of India.

EEC			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	**INDIGENOUS KNOWLEDGE SYSTEM IN RESOURCE MANAGEMENT**		
CourseCode	M24-GEO-411		
CourseType	EEC		
Levelofthecourse	400-499		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	Explain traditional knowledge. help in improving decision-makers. help conservation and management of natural Resources. understand the linkage between local people and Natural Resources.		
Credits	Theory	Practical	Total
	2	0	2
TeachingHoursperweek	2	0	2
InternalAssessmentMarks	15	0	15
End-TermExamMarks	35	0	35
Max.Marks	50	0	50
ExaminationTime	3 hours		

PartB-ContentsoftheCourse

Instructions for Paper-Setter: The examiner will set 9 questions, with two questions from each unit and one compulsory question. This compulsory question (Question No. 1) will consist of 7 parts and cover the entire syllabus. Examinees are required to attempt a total of 5 questions, which includes selecting one question from each unit and the compulsory question. All questions will carry equal marks.

Unit	Topics	Contact Hours
I	Introduction to Indigenous knowledge, the concept of Traditional /indigenous knowledge system. The role of Traditional Technical Knowledge in biodiversity conservation.	15
II	Case studies: 1. A study of traditional knowledge in agricultural resources and practices. 2. A study of traditional knowledge of water harvesting systems 3. An exploration of the ethical principles guiding resource management	15

	and governance among the Adivasi communities in central India			
TotalContactHours				30
SuggestedEvaluationMethods				
InternalAssessment:15			**EndTermExamination:50**	
➢ **Theory**		**15**	➢ **Theory:**	**35**
• ClassParticipation:		4	WrittenExamination:50	
• Seminar/presentation/assignment/quiz/class testetc.:		4		
• Mid-TermExam:		7		
PartC-LearningResources				
RecommendedBooks/e-resources/LMS: 1. Julian T Inglis (1993) Traditional Ecological Knowledge, Concepts And Cases, International Development Research Centre. 2. Charles R Menzies (2006) .Traditional Ecological Knowledge and Natural ResourceManagement, University of Nebraska Press.				

D			
Session:2024-25			
PartA–Introduction			
NameofProgramme	M.Sc.Geography		
Semester	IV		
NameoftheCourse	***PROJECT (DISSERTATION)***		
CourseCode	M24-GEO-		
CourseType	D		
Levelofthecourse	500-599		
Pre-requisiteforthecourse(ifany)	N.A.		
CourseLearningOutcomes(CLO) Aftercompletingthiscourse,thelearnerwillbeable to:	The students will learn to write a project report/dissertation, after duly following all the research methodology steps taught in the course Research Methodology in Geography (Course code: M24-GEO-202).		
Credits	Theory	Practical	Total
	0	12	12
TeachingHoursperweek	0	8	8
InternalAssessmentMarks	0	100	100
End-TermExamMarks	0	200	200
Max.Marks	0	300	300
ExaminationTime	3 hours		
PartB-ContentsoftheCourse			
Instructions: Staff council will decide and display the number of seats available for dissertation during the 3rd semester and choice of topics will be asked. If numbers of candidates are more than seats displayed, the suitable methodology will be decided by the staff council. The candidates selected for dissertation will have to submit and present his/her topic before staff council on or before the dates decided by staff council during the 3rd semester. The candidates are required to submit his/her dissertation at least 15 days before the commencement of final exams of 4th semester. The internal assessment marks of the candidates will be based on the his/her presentation and evaluation done by the staff council.			
TotalContactHours			120
SuggestedEvaluationMethods			
InternalAssessment:150		**EndTermExamination:150**	
➢ **Presentation before staff council**	**50**	**Presentation**	**50**
• Evaluation of dissertation	100	Dissertation	100
•			
PartC-LearningResources			

RecommendedBooks/e-resources/LMS:

1. Archer, J.E. and Dalton, T.H.: Field Work in Geography, E.T. Bastaford Ltd., London, 1968.
2. Creswell, John W., Research Design; Qualitative, Quantitative and Mixed Methods Approach, SAGE Publications, Los Angeles, 2008.
3. Flick, U. An Introduction to Qualitative Research, 5th Edition, SAGE, 2014.
4. Jones, P.A.: Field Work in Geography, Longman, London, 1968.
5. Kothari, C. R., Research Methodology, Methods & Techniques, New Age International Publisher, N. Delhi, 2008.
6. Kumar Ranjit, Research Methodology: A step-by-step Guide for Beginners, SAGE Publications, Ltd. London (Third Edition), 2010.
7. Montello, D. and P. Sutton, An Introduction to Scientific Research Methods in Geography and Environmental Studies, SAGE, 2012.