

**National Education Policy (NEP) 2020 and
Learning Outcome-Based Curriculum Framework (LOCF)
For**

**Scheme PG A1:
Postgraduate Program: GEOGRAPHY (Course Work only)**

MA GEOGRAPHY



(To be effective from the Academic Session 2026-27)

**GURUGRAM UNIVERSITY, GURUGRAM (HARYANA)
(A State University established by Govt. of Haryana Act No.17 of 2017)**

**BASED ON THE SCHEME FOR THE POSTGRADUATE PROGRAMME-COURSE
WORK ONLY**

M.A. PROGRAMME IN GEOGRAPHY

General Instructions

Programme	: M.A. Geography
Duration	: Two year full time (Four Semesters)
Medium	: English and Hindi
Minimum Required Attendance	: 75%
Total Credits	: 102
Total Maximum Marks	: 2550

Instructions and Minimum Requirement for PG Degree:

To qualify the course, a student is required to secure a minimum of 40% marks in aggregate including the End Semester Examination and Internal Evaluation. The student must obtain at least 40% marks in each paper of Odd Semester and Even Semester in End Semester Examination and Internal Evaluation separately to qualify the semester.

- **Academic Year:** Two consecutive (one odd and one even) semester will constitute one academic year.
- **Semester:** Each Semester shall consist of 15-18 weeks of academic work equivalent to 90 actual teaching days excluding admission and examinations days.
- **Summer Term:** A summer term is for eight weeks during summer break. Internship/apprenticeship/work-based vocational education and training can be carried out during the summer term.
- **Tutorial:** Component of a course which involves problem-solving, learning through discussions and remedial teaching related to the contents and periphery of a course with the direct involvement of a teacher.



- **Core Courses:** The core courses are those courses whose knowledge is deemed essential for the students registered for a particular programme of study. The core courses shall be mandatory for all the students registered for that particular programme.
- **Elective Courses:** The elective courses can be chosen from a pool of papers. The courses may
 - be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provide an extended scope
 - offer an exposure to some other discipline/subject/domain
 - be aimed to nurture the candidate's proficiency/skill/values.
 These courses are intended to:
 - allow the student to specialize in one or more branches of the broad subject area;
 - help the student to acquire knowledge and skills in a related area that may have applications in the broad subject area;
 - help the student to bridge any gap in the curriculum and enable acquisition of essential skills (e.g. statistical, computational, language, communication skills, etc.); and
 - help the student to pursue an area of interest.
 - The student may also choose additional elective courses offered by the University to enable him/her to acquire extra credits from the discipline, or across the discipline.
- **Discipline Specific Elective (DSE) Course:** Elective course offered under the main discipline/subject of study is referred to as Discipline Specific Elective Course. The respective department may offer various DSE courses based on the requirements, scope and need of the programme. The department may also offer discipline related Elective courses of interdisciplinary nature.
- **Discipline Skill Enhancement Course (DSEC):** A discipline skill enhancement course is a course aimed to provide knowledge, skills, training and competencies in a discipline/subject.
- **Multidisciplinary Course (MDC):** A Multidisciplinary Course is an option to explore disciplines of interest beyond the choices of learners made in their major disciplines. These courses are based on introductory knowledge in a subject other than the discipline of Major subjects to gain knowledge across the discipline.
- **Ability Enhancement Course (AEC):** The Ability Enhancement (AE) Courses are based upon the content that leads to Knowledge enhancement; Environmental Science, English/Hindi/MIL Communication, etc. These courses are mandatory for all disciplines particularly at undergraduate level.
- **Skill Enhancement Course (SEC):** These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work. The main purpose of these courses is to provide students life-skills in hands-on mode so as to increase their employability.
- **Value added Courses (VAC):** These courses aim at enabling the students to acquire and demonstrate the acquisition of knowledge and understanding of human values, Indian Traditional Knowledge System (IKS), contemporary India, digital and technical solutions, health and wellness, yoga education, sports and fitness, etc.



- **Vocational Courses (VOC):** A vocational course is focused on practical work, preparing students for a particular skilled profession. Such courses develop capacities for sustenance, work, and economic participation and develop values and sensibilities toward physical work and dignity of labour.
- **Seminar:** A course or a component of a course which makes students to learn a specific topic through in-depth exploration and analysis of facts about the topic in a set-up that involves presentation, interactive discussions and collaborative learning under the supervision of a teacher.
- **Internship:** A course requiring students to participate in professional employment- related activity or work experience or co-operative education activity with an entity external to the educational institution normally under the supervision of an employee of an organization or an individual professional. A key aspect of the internship is induction into actual, formal and organized work situations. Internship involves working with local industry (Government or Private Organizations), business establishments, artists, craft persons, etc. to provide opportunities for students to actively engage in on-site experiential learning.
- **Field Work/Practice/Survey/Project:** A course or a component of course which enables students to participate in field-based learning/project, involving application of knowledge in solving/analyzing/exploring a real-life situation/difficult problem under the supervision of a teacher/mentor.
- **Credit Point:** It is the product of the grade point and the number of credits for a course.
- **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.
- **Credit:** A unit by which the course work is measured. A credit defines the quantum of contents/syllabus prescribed for a course and determines the number of hours of instruction required per week. Thus, in each course, credits are assigned on the basis of the number of lectures/tutorials/laboratory work/field work and other forms of learning required for completing the contents in 15- week schedule. Two hours of laboratory work/field work etc. is generally considered equivalent to 1 hour of lecture.

1 Credit = 1 Theory/Tutorial period of one-hour duration, or

In case of practical, 1 Credit = 1 Practical period of two-hour duration

A one-credit of Seminar or Internship or Studio activities or Field practice /projects or Community engagement and service means two-hour engagements per week. Accordingly, in a semester of 15 weeks duration, one credit in these courses is equivalent to 30 hours of engagement, or as specified by the Board of Studies.

- **Internal Marks of Attendance** will be given as under;

Attendance %	Below 55	55-65	65-70	70-75	75-80	More then 80
Marks	0	1	2	3	4	5

PG PROGRAMME (TWO YEARS) AFTER 3 YEAR UG PROGRAMMES)

SCHEME OF PROGRAM

Scheme PG A1: Postgraduate Program (Course work only): (Geography Subject)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Total Credits	MARKS				
			(Hrs)				Credits			TI	TE	PI	PE	Total
	Core Course(s)													
CC-A01	Geomorphology and Oceanography (Theory)		3	1	-	3	1	-	4	30	70	-	-	100
CC-A02	Climatology (Theory)		3	1	-	3	1	-	4	30	70	-	-	100
CC-A03	Advanced Geography of India (Theory)		3	1	-	3	1	-	4	30	70	-	-	100
CC-A04	Advanced Cartography (Practical)		-	-	8	-	-	4	4	-	-	30	70	100
	Discipline Specific Elective Courses (Note: Students have to opt Any One of the following)													
DSE-01	i. Geography & Ecosystem (Theory) ii. Urban Geography (Theory) iii.Tropical Climatology (Theory) iv.Geography of Health and Wellbeing (Theory)		2	1	-	2	1	-	3	25	50	-	-	75
	Multidisciplinary Course(s)													
MDC-01	One from Pool								3					75
	Ability Enhancement Course(s)													
AEC-01	One from Pool								2					50
	Value-added Course(s)													
VAC-01	One from Pool								2					50
Total Credits									26					650

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Total Credits	MARKS					
			(Hrs)			Credits				TI	TE	PI	PE	Total	
Core Course(s)															
CC-A05	Quantitative Methods in Geography (Theory)		3	1	-	3	1	-	4	30	70	-	-	100	
CC-A06	Geographical Thought (Theory)		3	1	-	3	1	-	4	30	70	-	-	100	
CC-A07	Regional Development and Planning: with special Reference to India (Theory)		3	1	-	3	1	-	4	30	70	-	-	100	
CC-A08	Interpretation of Topographical Sheets and Morphometric Analysis (Practical)		-	-	8	-	-	4	4	-	-	30	70	100	
Discipline Specific Elective Courses (Note: Students have to opt Any One of the following)															
DSE-02	i. Agriculture Geography (Theory) ii. Political Geography (Theory) iii. Social and Cultural Geography (Theory) iv. Geography of Natural Hazards and Disaster Management (Theory)		2	1	-	2	1	-	3	25	50	-	-	75	
Multidisciplinary Course(s)															
MDC-02	One from Pool								3					75	
Ability Enhancement Course(s)															
AEC-02	One from Pool								2					50	
Skill Enhancement Course(s)															
SEC-01	One from Pool								2					50	
Total Credits									26					650	

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Total Credits	MARKS					
			(Hrs)			Credits				TI	TE	PI	PE	Total	
Core Course(s)															
CC-A09	Population and Settlement Geography (Theory)		3	1	-	3	1	-	4	30	70	-	-	100	
CC-A10	Principles of RS, GIS and GPS (Theory)		3	1	-	3	1	-	4	30	70	-	-	100	
CC-A11	Fundamentals of Remote Sensing (Practical)		-	-	8	-	-	4	4	-	-	30	70	100	
Discipline Specific Elective Courses (Note: Students have to opt Any One of the following)															
DSE-03	i. Geography of Tourism (Theory) ii. Economic Geography (Theory) iii. Arid Geomorphology (Theory) iv. Geography of Water Resource (Theory)		2	1	-	2	1	-	3	25	50	-	-	75	
Multidisciplinary Course(s)															
MDC-03	One from Pool								3					75	
Skill Enhancement Course(s)															
SEC-02	One from Pool								2					50	
Value-added Course(s)															
VAC-02	One from Pool								2					50	
Seminar															
	Seminar								2					50	
Internship/Field Activity#															
	Internship /Field Activity#								4					100	
Total Credits									28					700	

#Four credits of internship earned by a student during summer internship after 2nd semester will be counted in 3rd semester of a student who pursue 2nd year PG Program without taking exit option.

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Total Credits	MARKS					
			(Hrs)			Credits				TI	TE	PI	PE	Total	
Core Course(s)															
CC-A12	Research Methodology (Theory)		3	1	-	3	1	-	4	30	70	-	-	100	
CC-A13	Applications of Geo-spatial techniques (Practical)		-	-	8	-	-	4	4	-	-	30	70	100	
Discipline Specific Elective Courses (Note: Students have to opt Any One of the following)															
DSE-04	i. Industrial Geography (Theory) ii. Gender Geography (Theory) iii. Crime Geography (Theory) iv. Natural Resource Management (Theory)		2	1	-	2	1	-	3	25	50	-	-	75	
Multidisciplinary Course(s)															
MDC-04	One from Pool								3					75	
Ability Enhancement Course(s)															
AEC-03	One from Pool								2					50	
Community Engagement/Field Work/Survey/Seminar															
	Field Work and Report Writing		-	-	12	-	-	6	6	-	-	50	100	150	
Total Credits									22					550	

MDC: (Multidisciplinary Course)**Semester 1**

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-01	Fundamentals of Geography (Theory)		2	1	-	2	1	-	3	25	50	-	-	75

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-02	Geography of Haryana (Theory)		2	1	-	2	1	-	3	25	50	-	-	75

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-03	Geography in Everyday Life (Theory and Practical)		2	-	2	2	-	1	3	15	35	5	20	75

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-04	Urban Environment Challenges (Theory and Practical)		2	-	2	2	-	1	3	15	35	5	20	75

Skill Enhancement Course from the department for pool of the Courses in the University

(These courses are offered by each department for students of other departments/same department and is designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work.)

SEC: (Skill Enhancement Course)

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
SEC-01	Reading and Interpretation of Maps (Theory and Practical)		1	-	2	1	-	1	2	5	20	5	20	50

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
SEC-02	Computer aided Geographical graphs and diagrams (Practical)		-	-	4	-	-	2	2	-	-	15	35	50

Value Added Course from the department for pool of the Courses in the University

(All the departments will offer value added course for the students of same or different departments.)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-01	Water Conservation Techniques: Geographical Perspectives (Theory and Practical)		1	-	2	1	-	1	2	5	20	5	20	50

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-02	Green, Energy and Water Crediting Techniques: Geographical Perspectives (Theory and Practical)		1	-	2	1	-	1	2	5	20	5	20	50



CREDIT HOURS FOR DIFFERENT TYPES OF COURSES AND MARKS DISTRIBUTION

Hours to earn credits will be as follows: Nature of Work	Course Credits	Contact hours per week	Contact hours per semester (15 weeks)
Lecture	01	01	15
Tutorial per paper	01	01	15
Practical, Seminar, Internship, field practice/project, or community engagement, etc.	01	02	30

Courses	Total Credits	L (Credits)	T (Credits)	P (Credits)	Marks			
					TI	TE	PI	PE
Only Theory	4	3	1	-	30	70	-	-
	3	2	1	-	25	50	-	-
	2	1	1	-	15	35	-	-
Theory and Practicum	4	3	-	1 (2 hrs)	25	50	5	20
	4(Where Practical is dominant)	2	-	2 (4 hrs)	15	35	15	35
	3	2	-	1 (2 hrs)	15	35	5	20
	2	1	-	1 (2 hrs)	5	20	5	20
When Practicum is separate course	2	-	-	2 (4 hrs)	-	-	15	35
	3	-	-	3 (6 hrs)	-	-	25	50
	4	-	-	4 (8 hrs)	-	-	30	70
AEC/VAC	2	2			15	35	-	-
SEC	3	2		1 (2 hrs)	15	35	5	20
	2	1		1 (2 hrs)	5	20	5	20
DSE	4	3		1 (2 hrs)	25	50	5	20
Minor/VOC	4	2		2 (4 hrs)	15	35	15	35
Internship	4			4 (8 hrs)			30	70

L= Lecture; T= Tutorial, P= Practicum; Ti= Theory Internal Assessment; TE= Theory End Semester Examination; PI= Practicum Internal; PE= Practicum End Semester examination

Note: Tutorial batch size (PG Programme: 12-15 students) Practical Group size (PG Programme: 12-15 students)

Based on the scheme for the Postgraduate Program-Course Work only (GEOGRAPHY)

Programme: M.A. Geography

Program outcomes (POs) and Program Specific Outcomes (PSO) are specific types of knowledge and skills that students are expected to acquire in the program and to be able to demonstrate upon completion in the field of Geography. Upon completion of the **Master of Arts in Geography**, students will be able to demonstrate the following PO and PSO under the national Education Policy (NEP) 2020: -

Program Outcomes (POs)

- Understand the theoretical and applied aspects of geography as a branch of Knowledge and demonstrate an advanced understanding of and ability to differentiate among the various methodologies used in geography.
- Compare and contrast the theories, philosophies, and concepts in the discipline of geography, including unifying themes of spatial patterns and structures, the interrelationship between people and places, and the interactions between nature and society. Comprehend key methodological and different approaches to interpret geographical facts.
- Capable to learn and work efficiently as an individual, and as a member of group in multidisciplinary settings.
- Develop a strong sense of environmental values, being well-informed about sustainable development goals, as well as various cross-cutting issues affecting our planet.
- Physical field surveys will enable the students to understand the landforms, geomorphic process and associated hazards. They will able to develop their field observations, data gathering and interpretations skill.
- To develop the skills of using geographical instruments, drawing the map and making models with help of advance professional software(s). Enhance their practical skill through field visits and firsthand experience of tools/equipment.
- To provide a conceptually and practically sophisticated understanding of spatial issues and their association with the environment, socio-economic, political, and cultural realm. To develop ability to communicate efficiently on scientific issues with the society for proper learning and understanding.
- Capability of applying knowledge, critical thinking, analytical reasoning to solve scientific and other problems. Ability to apply reasoning to assess the different issues related to society and the consequent responsibilities relevant to the professional scientific practices.
- Be proficient in research writing, preparing manuscripts, and designing research projects. Identify frontier area of research and sub-branches of geography for further research.
- Broaden their job prospects in qualifying various competitive examinations and join various industries and research institutes. The Course is oriented towards emerging job opportunities and future prospects for the students. The students will be assisted in preparing for various competitive exams.



Program Specific Outcomes (PSOs)

- To understand the human and physical phenomena using specialized knowledge pertaining to various sub-fields of geography.
- To develop an understanding of the Settlements, transport network, spatial interaction through various mode of transportation and location models to investigate economic development.
- To understand the climatic phenomena and its impact on different activities performed by human in different regions.
- Recognize the significance of resource management, regional planning, and sustainable development, ensuring responsible and informed decision-making.
- To apply geographical knowledge, tools and techniques to address various geo-spatial issues.
- Learning the techniques of data acquisition, processing and interpretation of spatio-temporal information.
- Demonstrate knowledge and expertise in field excursions, advanced surveying techniques and digital map-making to aid them and interpret to represent geographical data effectively.
- Computer-based techniques Remote Sensing (RS) and Geographic Information System (GIS) are incorporated in the syllabus which prepares the students for further Information Communication Technology (ICT) based analytical studies.



MA Geography 1st Semester

Core Paper

Course Code	Course Title	Course Id	Credit
CC-A01	Geomorphology and Oceanography (Theory Paper)		4
CC-A02	Climatology (Theory Paper)		4
CC-A03	Advanced Geography of India (Theory Paper)		4
CC-A04	Advanced Cartography (Practical Paper)		4

&

DSE Paper (Optional)

Note: Students have to opt any One of the following

Course Code	Course Title	Course Id	Credit
DSE-01	i. Geography & Ecosystem (Theory Paper)		3
	ii. Urban Geography (Theory Paper)		3
	iii. Tropical Climatology (Theory Paper)		3
	iv. Geography of Health and Wellbeing (Theory Paper)		3



Gurugram University, Gurugram, Haryana (India)
M.A. Geography-I (Semester-I) Syllabus (as per NEP 2020 w.e.f. session 2026-27)
GEOMORPHOLOGY AND OCEANOGRAPHY
 Paper Code: CC-A01 (Theory: Core Paper)

Credit: 04 (3+1+0) L+T+P Hrs/Week	Total Marks	100
Time: 3 Hours	End Semester Exam:	70 Marks
Course Outcomes (COs): CO-01: The students will be able to identify different concepts of landform formation and associated agents. CO-02: They will understand the general de-gradational Processes and the formation of shape of the landforms around us. CO-03: They will be able to explain different types of landforms created by various agents and they will know the applications of Geomorphology in various sectors of life. CO-04: The course will aware the students about Oceans, their relief and various actions associated with Oceanic water circulation.	Internal Assessment:	30 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	20

Note:

The question Paper will have five units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining four units of question paper shall contain two essay type questions (having fourteen (14) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

All questions carry equal marks.

UNIT-I

Introduction to Geomorphology: Meaning, Nature and Scope; Fundamental concepts; Geological Time Scale; Interior of Earth; Continental Drift theory; Plate Tectonics- Plate margins and boundaries, movement and distribution of plates, tectonic activities along boundaries.

UNIT-II

Endogenetic Processes: Faulting, Folding and their Geomorphic expressions; Earthquake- Concept, causes, classification, measurement and global distribution; Volcanism- Concept, causes, classification, global distribution and associated landforms; **Exogenetic Processes:** Denudation; Weathering: Processes, causes, Types and significance; Mass Wasting: causes, Types, Significance; Geomorphic Cycle of Erosion: Davis and Penck.

UNIT-III

Geomorphic Process and resulting landforms: Fluvial, Glacial, Aeolian, Coastal and Karst Topography; **Applied Geomorphology:** Applications of Geomorphology in Regional Planning, Agriculture, Hydrology, Engineering and Natural Hazards.

UNIT-IV

Oceanography: Meaning, Nature and Scope; **Relief of Oceans:** Pacific, Atlantic and Indian Ocean, **Composition:** Temperature and Salinity, **Oceanic water circulation:** Ocean Currents: Origin, Types and dynamics, Current of Pacific, Atlantic and Indian Ocean; Tides, Waves, Tsunami; Ocean Deposits; **Coral Reefs:** Types, origin and distribution.



Suggested Readings:

- Bloom, A.L. (1992). *Geomorphology*. New Delhi: Prentice Hall of India.
- Bhatt, J.J. (1978). *Oceanography- exploring the planet ocean*. New York: D. van Nostrand Company.
- Bhutani, Smita, (2000). *Our Atmosphere*. New Delhi: Kalyanai Publishers.
- Chorley, R. J., Schumm, S. A. and Sugden, D. E. (1984). *Geomorphology*. London: Methuen.
- Dayal, P. (2019). *Geomorphology*. (in Hindi/Eng). New Delhi: Rajesh Publications.
- Garrison, T., (2001). *Oceanography-An invitation to marine science*. Belmont: Wadsworth Publishing Company.
- Husain, Majid (2002). *Fundamentals of physical Geography*. Jaipur: Rawat Publications.
- Kale, V. and Gupta, A. (2001). *Introduction to Geomorphology*. Kolkata: Orient Longman.
- Kennel, J.P. (1982). *Marine Geology*. New Jersey: Prentice Hall, Englewood Cliff.
- King, C.A. M. (1966). *Techniques in Geomorphology*. London: Edward Arnold.
- Lal, D.S. (2017). *Oceanography*. Allahabad: Sharda Pustak Bhawan.
- Singh Savindra (2020). *Geomorphology*, (in Hindi/Eng). Allahabad: Pravalika Publications.
- Sharma, R.C. (1985). *The Oceans*. New Delhi: Rajesh Publications.
- Strahler, A.N. and Strahler, A.H. (1996). *Introducing Physical Geography*. New York: John Willey and Sons.
- Thornbury, W.D. (1991). *Principles of Geomorphology*. New Delhi: John Wiley.
- Wooldridge, S. W and Morgan, R.S. (1991). *An Outline of Geomorphology*. Calcutta: Orient Longmans.



Gurugram University, Gurugram, Haryana (India)
M.A. Geography-I (Semester-I) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

CLIMATOLOGY

Paper Code: CC-A02 (Theory: Core Paper)

Credit: 04 (3+1+0) L+T+P Hrs/Week	Total Marks	100
Time: 3 Hours	End Semester Exam:	70 Marks
Course Outcomes (COs): CO-01: Students will be able to understand the fundamentals of atmospheric phenomena, Climate, Weather and Temperature. CO-02: They will be able to understand the atmospheric Pressure and wind circulation system. CO-03: To understand and analyse the role of moisture and Temperature in atmospheric instability, cloud Formation and Precipitation system on Earth. CO-04: They will enrich their knowledge about disturbances of Atmosphere, climatic classification, Climate change and global warming system.	Internal Assessment:	30 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	20

Note:

The question Paper will have five units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining four units of question paper shall contain two essay type questions (having fourteen (14) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

UNIT-I

Climatology: Meaning, Nature and Scope, Elements; **Atmosphere:** Structure and Composition. **Insolation and Temperature:** Process of heating and cooling of atmosphere, Horizontal and Vertical distribution of Temperature, Heat budget; Heat and Cold Waves.

UNIT-II

Atmospheric Pressure: Factors, distribution pattern- Vertical, horizontal and seasonal; **Circulation of Winds:** Types of winds- Planetary, Seasonal, Local; Walker Circulation- ENSO: El Nino and La Nina, **Origin of Monsoons:** modern concepts and Jet Streams; **Weather Disturbances:** Cyclones, Anti Cyclones.

UNIT-III

Air masses: Meaning, Characteristics, Classification and modification; **Fronts:** Frontogenesis, Frontolysis; **Atmospheric Moisture:** Evaporation- Factors affecting Evaporation, Condensation- Factors affecting Condensation; Humidity- Sources, Types and distribution of Humidity; Adiabatic change of Temperature; **Clouds:** formation and Types of clouds; **Precipitation** and its Types.

UNIT-IV

Classification of Climatic: Approaches, classification of Koppen and Thornthwaite; **Climate Change:** concept, Evidences, cause and effects; **Global Warming:** concept, causes and impact; Acid Rain, Ozone Depletion, Greenhouse effect, Glacial Lake outburst (GLOF).



Suggested Readings:

- Aggarwal, S.K. (1972). *Fundamentals of Ecology*. New Delhi: Ashish Publishers.
- Barry, R.G. and Chorely, R.J. (Ed.). *Atmosphere, weather and climate*. London: Methuen & Co. Ltd.
- Collins, J.M. (2014). *Climatology*. Oxford Press.
- Critchfield, H.J. (Rp.2010). *Climatology*. New Delhi: Prentice Hall of India.
- Critchfield, H.J. (1987). *Samanya Jalvayu Vigyan* (Translated in Hindi by Yashwant Govind Joshi). Bhopal: Madhya Pradesh Hindi Grantha Acadmy.
- Das, P.K. (1984). *The Monsoons*. New Delhi: National Book Trust.
- Griffith, J.F. and Driscell, D.M. (1982). *Survey of Climatology*. Charles Merrill.
- Lal, D.S. (2016). *Climatology* (in Hindi/Eng). Allahabad: Sharda Pustak Bhawan.
- Oliver, J. E. and Hidore, J. J. (2003). *Climatology: An atmospheric science*. Delhi: Pearson Education.
- Riehl, H. (1968). *Introduction to Atmosphere*. New York: McGraw Hill.
- Robinson, P.J. and Henderson, Sellers (1986). *Contemporary Climatology*. London: Longman.
- Singh, Savindra (2005). *Climatology*. Allahabad: Prayag Pustak Bhawan.
- Trewartha, G.T. (1980). *Introduction to Climate*. New York: McGraw Hill.



Gurugram University, Gurugram, Haryana (India)
M.A. Geography-I (Semester-I) Syllabus (as per NEP 2020 w.e.f. session 2026-27)
ADVANCED GEOGRAPHY OF INDIA
 Paper Code: CC-A03 (Theory: Core Paper)

Credit: 04 (3+1+0) L+T+P Hrs/Week	Total Marks	100
Time: 3 Hours	End Semester Exam:	70 Marks
Course Outcomes (COs): CO-01: After completion of this course students will have in-depth knowledge of the Physical Geological diversity of India. CO-02: They will be able to understand the diversification and issues of Indian Agriculture. CO-03: They will know the distribution of resources and assessment of economic development of India. CO-04: They will be able to understand and correlate the Geographical aspects of Land, Climate, People and Economy of Indian sub-continent.	Internal Assessment:	30 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	20

Note:

The question Paper will have five units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining four units of question paper shall contain two essay type questions (having fourteen (14) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

UNIT-I

India: Location setting and Extent; Physiographic divisions of India; **Drainage** System (Himalayan and Peninsular); **Climate:** Seasonal Weather characteristics, Climatic regions of India (Koeppen); **Monsoon** in special context to India: Modern theories; Jet Stream, El-Nino and La-Nina, ITCZ.

UNIT-II

Natural Vegetation and Major **Soils** of India; **Indian Agriculture:** its characteristics, regional variation, Problems and Prospects of Indian Agriculture; **Green revolution** in India; **Major crops:** geographical conditions, Production and distribution of – Food Crops (Rice, Wheat, Maize), Cash Crops (Sugarcane, Cotton, Oilseeds) and Plantation Crops (Tea, Coffee, Rubber). Major Agro-Climatic zones of India.

UNIT-III

Minerals of India: Iron, Mica, Coal, Petroleum, Natural Gas; **Major industries:** Cotton-textile, Iron and steel; Industrial development since Independence of India; **Major industrial regions** of India; **Trade:** Domestic and international- Trends, Composition and direction; **Transportation** Network: Railways, Roadways, Airways, Waterways and Pipeline.

UNIT-IV

Population: Distribution, Growth, Density of Population; **Demographic Attributes:** Sex-Ratio, Literacy; **Urbanisation** in India-Trends and Pattern; Population policies; Food Security and Right to Food. **Globalisation** and its impact of Indian Economy; Salient Features of India's Five-Year Plans.



Suggested Readings:

- Bindra, S.S. (1989). *India and her neighbors*. New Delhi: Deep and Deep Publications.
- Chandna, R.C. (1998). *Geography of Population*. New Delhi: Kalyani Publishers.
- Chatterjee, Rupali. (2015). *Geography of India*. New Delhi: Global Academic Publishers.
- Deshpande, C.D (1992). *India- A regional interpretation*. New Delhi: Northern Book Centre.
- Gautam A. (2009). *Advanced Geography of India*. Allahabad: Sharda Pustak Bhawan.
- Gopal Krishan (2017). *The vitality of India: A regional perspective*. Jaipur: Rawat Publication.
- Johnson, B.L.C. (1980). *India: resources and development*. London: Arnold-Hinemann.
- Khullar, D.R. (2000). *India: A comprehensive Geography*. New Delhi: Kalyani Publishers.
- Mamoria, C. B. and Mishra, J. P. (2021). *Bharat ka Bhugol*. (in Hindi). Agra: Sahitya Bhawan Publication.
- Majid, H. (2020). *Geography of India*. McGraw Hill Education (India) Private Ltd.
- Sharma, T.C. and Coutinho, O. (1988). *Economical and commercial Geography of India*. New Delhi: Vikas publishing house Pvt. Ltd.
- Singh, G. (1995). *A Geography of India*. New Delhi: Atma Ram & Sons.
- Singh, R.L. (1971). *India: A regional Geography*. Varanasi: National Geographical Society of India.
- Spare, O.H.K. and Learmonth, A.T.A. (1967). *Geography of India and Pakistan: Land, People and Economy*. London: Methuen (first Indian Edition, 1984, Munshiram Manoharlal, New Delhi).
- Tirtha, R. (2004). *Geography of India*. Jaipur: Rawat Publications.
- Tiwari, R.C. (2010). *Geography of India*. Allahabad: Prayag Pustak Bhawan.



Gurugram University, Gurugram, Haryana (India)
M.A. Geography-I (Semester-I) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

ADVANCED CARTOGRAPHY

Paper Code: CC-A04 (Practical: Core Paper)

Credit: 04 (0+0+8) L+T+P Hrs/Week		Total Marks	100
Time: 4 Hours	PE	End Semester Practical Exam:	70 Marks
Course Outcomes (COs): CO-01: Students will be able to understand the meaning of Cartography, its essentials and different types of Distribution Maps with their importance. CO-02: They will develop the skill of draw the Cartograms and be able to analyze the Weather maps with the help of Weather Elements reading and interpretation for Weather forecasting.	PI	Internal Assessment: Attendance Practical assignment Sessional Exam	30 Marks (5) (5) (20)

Note: The question paper would be set from the syllabus covering the full content. The question paper for the written examination (4 hours duration) shall be made by the external examiner in assistance with the internal examiner. The answer books would be evaluated by the external examiner on the day of examination. The question paper in this course will be divided into two parts.

Part-I will consist of 8 short answer type questions carrying 1 mark each.

Part-II will consist of 8 Choice based descriptive (long answer type) questions/exercises from the entire syllabus and carrying 8 marks each. Students will have to answer any 4 questions/exercises.

- **Cartography:** Meaning, Nature and History of Cartography;
- **Map:** Concept, Map Essentials and Classification of Maps;
- **Symbolization-** Nominal, Ordinal and Interval/Ratio; Colour Theory in Cartography.
- **Distribution Maps:** Qualitative methods- Colour-Patch, Simple Shade, Pictorial, Choro schematic, Naming Methods;
- **Distribution Maps:** Quantitative Methods-Choropleth, Isopleths, Dot and Diagrammatic methods.
- **Cartogram:** Rectangular, Traffic Flow, Spatial Accessibility and Isochronic Cartogram
- **Weather Maps:** fundamentals, Weather Instruments, Recording of Weather Elements, Representation of Weather Elements on the Map, Weather Symbolization;
- **Interpretation of Indian daily Weather Maps/Reports:** (December-January and July-August months)

Total Minimum (25 Exercises)



Distribution of Marks: In Practical Paper, the marks would be divided as follows:

		Type	Marks and no. of questions	Marks	Marks	Total Marks
(a).	Written Examination	Part-I	1 Marks 8 questions	8	40	70
		Part-II	8 marks 4 questions	32		
		Viva-Voce				
	File Record				20	
(b).	Internal Assessment	Sessional Exam			20	30
		Practical Assignment			5	
		Attendance			5	
Total Marks =						100

Suggested Readings:

- Khullar, D.R. (2015). *Practical Geography*. Ludhiana: Kalyani Publishers.
- Mishra, R.N. and Sharma, P.K. (2020). *Prayogik Bhoogol*. (in Hindi). Jaipur: Rawat Publications.
- Monkhouse, F.J. and Wilkinson, H.R. (1971). *Maps and Diagrams*. London: Methuen.
- Robinson A. H. (2009). *Elements of Cartography*. New York: John Wiley and Sons.
- Sarkar, A. (2015). *Practical Geography: A systematic approach*. New Delhi: Orient Black Swan Private Ltd.
- Sharma, J. P. (2020). *Prayogtmak Bhugol ki Rooprekha*. (in Hindi). Meerut: Rastogi Publications.
- Singh, R. L. and P. K. Dutta, (2012). *Prayogatmak Bhugol*. (in Hindi). Allahabad: Central Book Depot.
- Singh R. L. and Rana P. B. Singh (1999). *Elements of Practical Geography*. (in Hindi). New Delhi: Kalyani Publishers.
- Taylor, D.R.F. (1985). *Education and training in contemporary Cartography*. John Willey.

Gurugram University, Gurugram, Haryana (India)
M.A. Geography-I (Semester-I) Syllabus (as per NEP 2020 w.e.f. session 2026-27)
GEOGRAPHY AND ECOSYSTEM
 Paper Code: **DSE-01** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: The students will be able to understand the basic concepts of Ecosystem and its functions. CO-02: They will be able to identify and analyse the different biomes and their ecological characteristics. CO-03: They will be able to understand and develop skills to decode Environmental Hazards and issues environmental conservation with their context to man-environmental relationship.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Geography and Ecosystem: concepts; Ecology & Ecosystem: fundamentals, Components, Type and Functions of Ecosystem; Ecological Pyramids: Trophic levels, Types; Food Chain, Food Web; Biogeochemical Cycles: Carbon, Nitrogen, Phosphorus, Water cycle; Men-Environment relationship.

UNIT-II

Biome: Concept, affecting factors, Classification; Salient features of Biomes: Tropical Rain Forest, Temperate, Grasslands, Tundra, Taiga, Monsoon, Mountain, Desert, Aquatic (Marine, River, Lake and Pond); Environmental Hazards and Disasters: Earthquake, Volcano, Cyclone, Flood and Drought; Pollution: Air, Water and Noise pollution;

UNIT-III

Environmental Issues: Global Warming, Climate Change, Ozone Depletion; Environment Management and Biodiversity Conservation: Environmental protection Programs and Policies-Global and India specific; International Treaties and summits: Brundtland Commission, The Earth Summit, Kyoto Protocol, Agenda 21, Paris Declaration etc.; Application of GIS in Environment Management.



Suggested Readings:

- Bodkin, E. (1982). *Environmental studies*. Columbus (Ohio): Charles E. Merrill Pub Co.
- Chandna, R.C. (1998). *Environmental awareness*. New Delhi: Kalyani Publishers.
- Gautam, Alka (2010). *Environmental Geography*. (In Hindi/Eng). Allahabad: Sharda Pustak Bhawan.
- Mishra, S.P. and Pandey, S.N. (2016). *Essential environmental studies*. New Delhi: Ane publications.
- Nobel and Wright (1996). *Environmental science*. New York: Prentice Hall.
- Parshad, Gayatri and Nautiyal, R. (2021). *Environmental Geography*. Paryagraj: Sharda Pustak Bhawan.
- Sharma, H.S. (2000). *Ranthambhore sanctuary-dilemma of eco-development*. New Delhi: Concept.
- Simmons, I.G. (1981). *Ecology of Natural Resources*. London: Edward Arnold.
- Singh, S. (2020). *Environmental Geography*. (In Hindi/Eng). Prayagraj: Pravalika Publications.
- Smith, R.L. (1992). *Man, and his Environment: An Ecosystem Approach*. London: Harper & Row.
- Thomas, W.L. (1974). *Man's Role in Changing the Face of the Earth*. The University of Chicago Press.



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M.A. Geography-I (Semester-I) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

URBAN GEOGRAPHY

Paper Code: **DSE-01** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: Students will be able to understand the fundamentals of Urbanization the different concepts of Urban Growth and Urban Hierarchy. CO-02: They will be able to understand the different Urban land use theories and Urban Morphology structure. CO-03: The students will be able to highlight the complexities of urban cities and the experience of living in these cities to understand the role of urban governance in planning and development.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Urban Geography: Nature, Scope, Origin and historic evolution; Major Concept of Urban System: Urban, Urbanization, Urbanism, Rank size rule, Primate City, Rurban, Rural-Urban Fringe, Rural-Urban Continuum, Conurbation, Global city, Mega city, Millennium city.

UNIT-II

Theories of Urban land use- Burgess, Homer Hyot, Harris and Ullman;

Urban growth theories: Central Place Theory of Christaller and Losch.

UNIT-III

Classification of Towns; Urbanisation: Levels, Trends and Patterns of Urbanization in the World and India specific; Issues and challenges of Urbanization in India, Slums and Shanty Towns; Role of State in Urban Planning: Master Plans, Smart city; Application of GIS in urban planning.



Suggested Readings:

- Bansal, S.C. (2010). *Urban Geography*. Meerut: Meenakshi Prakashan.
- Berry, B.J.L. and Horton, F.F. (1970). *Geographic perspectives on urban systems*. New Jersey: Printice Hall.
- Bridge, B. and Watson, S. (2000). *A companion to the city*. Blackwell, Oxford.
- Carter, H. (1972). *The study of urban Geography*. London: Edward Arnold Publishers.
- Dickinson, R.E. (1964). *City and region*. London: Routledge.
- Dwyer, D.J. (1971). *The city as a centre of change in Asia*. Hongkong: University of Hong Kong Press.
- Geddes, P. (1968). *Cities in evolution*. London: Ernest Benn Publishers.
- Hall, P. (1992). *Urban and regional planning*. London: Routledge.
- Hauser, Philip, M. and Schnore, Leo F. (1965). *The Study of urbanization*. Wiley.
- Johnson, I. (1972). *Urban Geography: An introductory analysis*. Germ Area.
- Kundu, A. (1992). *Urban development and urban research in India*. Khanna Publication.
- Mayer & Kohn (1959). *Readings in Urban Geography*. Chicago Arca
- Ramachandran, R. (1991). *Urbanization and urban systems in India*. Delhi: Oxford University Press.
- Rao, B. P. & Sharma, N. (2007). *Nagariya Bhoogol*. (in Hindi). Gorakhpur: Vasundhara Prakashan.
- Rao, VLS, P. (2013). *Urbanization in India: Spatial Dimensions*. New Delhi: Concept Publishing Co.
- Singh K and Steinberg F. (1998). *Urban India in crisis*. New Delhi: New Age Interns.
- Sidhartha, K. and Mukherjee (2021). *Cities, urbanization and urban systems*. New Delhi: Kitab Mahal,
- Singh, R.L. and Singh, Rana P.B., (1979). *Place of small towns in India*. Varanasi: National Geographical Society of India.
- Sovani, N.V. (1966). *Urbanization and urban India*. Bombay: Asia Publishing House.
- Taylor G.T. (1964). *Urban Geography*. London: Muthuen and Co.



Gurugram University, Gurugram, Haryana (India)
M.A. Geography-I (Semester-I) Syllabus (as per NEP 2020 w.e.f. session 2026-27)
TROPICAL CLIMATOLOGY
 Paper Code: **DSE-01** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: The students will aware about the tropical heat balance and its global consequences CO-02: They will Enrich their knowledge about circulation pattern and dynamics of Monsoon climates. CO-03: To familiarize with dynamics and distribution of rainfall in tropics and about impact of global warming on tropical climate.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Tropical Climatology: Concept, nature, scope and significance; Tropical Climate; Key characteristics and Classification (Koppen); Distribution of Temperature in tropical region; Energy Balance in tropic regions; Atmospheric Pressure in Tropical region.

UNIT-II

Tropical Planetary Circulation –Circulation cell theory, Hadley Cell, Walker cell, Trade winds, ITCZ and Jet Stream. ELNINO and ENSO effect; Monsoon: Theories of Monsoon origin, characteristics and areas of influence; Tropical Cyclone; Causes, Origin and Formation, Impacts on Global climate.

UNIT-III

Tropical Rainfall: Dynamics, Global distribution; Human adaptation to Tropical climate; Climate Change: Causes, anthropological impact on climate; Global Warming: causes, Impact on Tropical climate and Biomass.



Suggested Readings:

- Aggarwal, S.K. (1972). *Fundamentals of Ecology*. New Delhi: Ashish Publishers.
- Barry, R.G. and Chorley, R.J. (Ed.). *Atmosphere, Weather and Climate*. London: Methuen & Co. Ltd.
- Collins, J.M. (2014). *Climatology*. Oxford Press.
- Critchfield, H.J. (Rp.2010). *Climatology*. New Delhi: Prentice Hall of India.
- Critchfield, H.J. (1987). *Samanya Jalvayu Vigyan* (Translated in Hindi by Yashwant Govind Joshi). Bhopal: Madhya Pradesh Hindi Grantha Acadmy.
- Das, P.K. (1984). *The Monsoons*. New Delhi: National Book Trust.
- Fein JS and PM Stephens (1987). *Monsoons*. Wiley Inter Sciences.
- Griffith, J.F. and Driscoll, D.M. (1982). *Survey of Climatology*. Charles Merrill.
- Lal, D.S. (2016). *Climatology* (in Hindi/Eng). Allahabad: Sharda Pustak Bhawan.
- McGregor, G.R. and Simon, Nierswold (1998). *Tropical Climatology*. An introduction to the Climates of the Low Latitudes. Wiley Interscience.
- Oliver, J. E. & Hidore, J. J. (2003). *Climatology*. Delhi: An Atmospheric Science. Pearson Education.
- Parenti, C. (2011). *Tropic of Chaos*. New York: Climate Change and New Geography of Violence. Nation Books.
- Robinson, P.J. and Henderson Sellers (1986). *Contemporary Climatology*. London: Longman.
- Singh Savindra (2005). *Climatology*. Allahabad: Prayag Pustak Bhawan.
- Thompson, RD and A Perry (1997). *Applied Climatology*. London: Principles and Practices. Routledge.
- Trewartha, G.T. (1980). *Introduction to Climate*. New York: McGraw Hill.



Gurugram University, Gurugram, Haryana (India)
M.A. Geography-I (Semester-I) Syllabus (as per NEP 2020 w.e.f. session 2026-27)
GEOGRAPHY OF HEALTH AND WELL-BEING
 Paper Code: **DSE-01**(Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: The students will be able to understand basic concept of health in its spatial context. CO-02: They will analyze the spatial patterns of various classified diseases. CO-03: They will also able to describe about various health issues with their preventive measures and broad aspects of various health Programs in different parts of the world.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Geography of Health and wellbeing: Concept, Scope and significance; Approaches to the study of Health Geography: Ecological, Social and Spatial; Approaches to the study of Wellbeing: Need based, Relative Standard and Capacity; Geographical factors affecting Human Health and Well Being.

UNIT-II

Major types of Diseases: Genetic, Communicable and Non-Communicable, Occupational and Deficiency Diseases; Epidemic and Pandemic; WHO classification of Diseases;
 Diseases: Causes, ecology, distribution and Diffusion of- Malaria, Tuberculosis, Hepatitis, AIDS, Glycemia and Cardiovascular Diseases; Covid-19 pandemic.

UNIT-III

Role of WHO, UNICEF, Red Cross in global Health Programs; Food Security; Nutrition Deficiency; Health and Sanitation Facilities; Health Programmes and Health Care Infrastructure of India; Integration of Health Programmes with GIS.



Suggested Readings:

- Akhtar, Rais (1990). *Environment and Health Themes in Medical Geography*. New Delhi: Ashish Publishing House.
- Ansari, S.H. (2005). *Spatial Organization of health care facilities in Haryana*. NGJI. Vol 51.
- Bradley, D. (1977). *Water, Wastes and Health in Hot Climates*. Chichester: John Wiley.
- Cliff, A.D. and Peter, H. (1988). *Atlas of Disease Distributions*. Oxford: Blackwell Publishers.
- Digby, A. and Stewart, L. (1996). *Gender, Health and Welfare*. New York: Routledge.
- Egles, J. and Woods, K.J. (1983). *The Social Geography of Medicine and Health*. London: Groom Helm 1st Edition.
- Hardham, T. and Tannav, M. (1995). *Urban Health in Developing Countries: Progress and Prospects*. London: Routledge.
- Hazra, J. (1997). *Health Care Planning in Developing Countries*. Calcutta: University of Calcutta.
- Learmonth, A.T.A. (1985). *Diseases in India*. New Delhi: Concept Pub. Company. 1st Edition.
- Mc. Glashan, N.D. (1972). *Medical Geography*. London: Methuen.
- Misra, R.P. (2007). *Geography of Health*. New Delhi: Concept Publishing Company.
- Phillips, D. and Verhasselt, Y. (1994). *Health and Development*. London: Routledge.
- Pyle, G. (1979). *Applied Medical Geography*. Silver Spring(USA): Winston Halsted Press.
- Smedley, B. D. & Syme. S. L. (2001). *Promoting Health. Intervention Strategies from Social and Behavioral Research*. National Academies Press.
- Singhai, G.C. (2006). *Medical Geography (Hindi)*. Gorakhpur: Vasundhra Publication.
- Wilkinson R G. (1996). *Unhealthy Societies*. London: The Afflictions of Inequality. Routledge.



MA Geography 2nd Semester

Core Paper

Course Code	Course Title	Course Id	Credit
CC-A05	Quantitative Methods in Geography (Theory Paper)		4
CC-A06	Geographical Thought (Theory Paper)		4
CC-A07	Regional Development and Planning: with special Reference to India (Theory Paper)		4
CC-A08	Interpretation of Topographical Sheets and Morphometric Analysis (Practical Paper)		4

&

DSE Paper (Optional)

(Note: Students have to opt any One of the following)

Course Code	Course Title	Course Id	Credit
DSE-02	i. Agriculture Geography (Theory Paper)		3
	ii. Political Geography (Theory Paper)		3
	iii. Social and Cultural Geography (Theory Paper)		3
	iv. Geography of Natural Hazards and Disaster Management (Theory Paper)		3



Gurugram University, Gurugram, Haryana (India)

M.A. Geography-I (Semester-II) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

QUANTITATIVE METHODS IN GEOGRAPHY

Paper Code: CC-A05 (Theory: Core Paper)

Credit: 04 (3+1+0) L+T+P Hrs/Week	Total Marks	100
Time: 3 Hours	End Semester Exam:	70 Marks
Course Outcomes (COs): CO-01: After completion of this course students will have in-depth knowledge of the Physical Geological diversity of India. CO-02: They will be able to understand the diversification and issues of Indian Agriculture. CO-03: They will know the distribution of resources and assessment of economic development of India. CO-04: They will be able to understand and correlate the Geographical aspects of Land, Climate, People and Economy of Indian sub-continent.	Internal Assessment:	30 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	20

Note:

The question Paper will have five units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining four units of question paper shall contain two essay type questions (having fourteen (14) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

UNIT-I

Statistics: Concept, nature and scope of Statistics; Geography and Statistics, Statistical Data: classification and Organization of Data, Data series; Graphic representation of frequency distribution, Histograms and Frequency curve; Sampling: Different Methods, signification of Sampling in Geographical study.

UNIT-II

Measures of Central Tendency: Arithmetic Mean, Median, Mode;

Centrographic techniques: Mean Centre, Median Centre and Standard Distance.

UNIT-III

Measures of dispersion: Range, Mean deviation, Standard Deviation; Coefficient of Variation, Skewness; **Measures of Inequality:** Lorenz Curve and Gini's Coefficient; Location Quotient. Crop combination.

UNIT-IV

Correlation and regression: Scatter diagram; correlation by Spearman's Rank Difference and Karl Pearson's; Significance testing of Correlation; Regression: construction of regression line, regression equations, coefficient and analysis.

Suggested Readings:

- Ebdon, D. (1983). *Statistics in Geography: A Practical Approach*. London: Blackwell.
- Gregory, S. (1978). *Statistical Methods and the Geographer*. London: Longman.
- Gupta, S.P. (2021). *Statistical Methods*. New Delhi: Sultan Chand and Sons.
- Mahmood, A. (2020). *Statistical Methods in Geographical Studies*. New Delhi: Rajesh Publications,
- Mathews, J.A. (1987). *Quantitative and Statistical Approaches to Geography*. Pergamon: Oxford.
- Pal, S.K. (1998). *Statistics for Geoscientists; Techniques and Applications*. New Delhi: Concept Publishing Company.
- Peter, J. Taylor (1977). *Quantitative Methods in Geography*. Boston: Houghton Mifflin Company.
- Robert, Hammond and Patrik, Mc., Cullagh (1974). *Quantitative Methods in Geography*. Clarendon Press Oxford.
- Yeates, Mauris (1974). *An Introduction to Quantitative Analysis in Human Geography*. New York: McGraw Hill.



Gurugram University, Gurugram, Haryana (India)

M.A. Geography-I (Semester-II) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

GEOGRAPHICAL THOUGHT

Paper Code: CC-A06 (Theory: Core Paper)

Credit: 04 (3+1+0) L+T+P Hrs/Week	Total Marks	100
Time: 3 Hours	End Semester Exam:	70 Marks
Course Outcomes (COs): CO-01: This course is to acquaint the students with the philosophy, methodology and historical development of geography as a professional field during different periods. CO-02: Students will acquire knowledge on the contribution made by geographers of different schools. CO-03: They will logically integrate with the broad currents of thought of dualism in Geography in the historical and recent period. CO-04: They will understand the development of concepts of geography in Modern time.	Internal Assessment: Attendance 5 Assignment 5 Sessional Exam 20	30 Marks

Note:

The question Paper will have five units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining four units of question paper shall contain two essay type questions (having fourteen (14) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

UNIT-I

Geography: Geography as a discipline, its Nature and Scope; Place of Geography in relation to other Natural and Social Sciences; Nature of geographic knowledge during ancient (Greek, Roman and Indian) and Medieval (Arab) periods, Dark age, during Discovery age; Impact of Explorations and Discoveries.

UNIT-II

Development of Geography: Modern Period: Foundations of modern geography, German, French, British and American schools of thought; Contributions of Kant, Humboldt, Ritter, W. M. Davis, Ratzel, Kumari Ellen Churchill Semple and Blache in Geography.

UNIT-III

Dualism in Geography: Physical & Human Geography, Descriptive & Analytical, Systematic & Regional Geography; myth and the reality about Dualisms; Environmental Determinism, Possibilism, Neo-determinism, Positivism.

UNIT-IV

Development of Geography in 21st Century: Conceptual and methodological developments and changing paradigms: Quantitative revolution, Radical, Behavioral, Post modernism; **Development of Geography in India:** Early Development of Geography in India, Developmental Initiatives during Colonial Period and Post-Independence, Contributions of Indian Geographers.



Suggested Readings:

- Adhikari, S. (2015). *Fundamentals of Geographical thought*. New Delhi: Orient Blackswan.
- Dickinson, R.E. (1969). *Makers of modern Geography*. London: Routledge and Kegan Paul.
- Dikshit, R. D. (2018). *Geographical thought: A contextual history of ideas*. New Delhi: Prentice Hall of India.
- Dubey, B. (1967). *Geographical concept in ancient India*. Varanasi: NGSI.
- Gosal, Singh, Gurdev (2015). *History of Geographic thought*. Chandigarh: Panjab University.
- Hartshorne, R. (1959). *Perspective on the nature of Geography*. Chicago: Rand McNally.
- Holt-Jensen, A. (2009). *Geography: history and concepts- A student's guide*. London: Sage.
- Hussain, M. (2015). *Evolution of geographical thought*. Jaipur: Rawat Pub.
- James, P.E. (1972). *All possible worlds: A history of geographical ideas*. Indianapolis. Odyssey Press. (Latest Edition 2005 is authored by Geoffrey J Martin).
- Jha, A.K. (2021). *Bhaugolik chintan ke vividh aayam*. (in Hindi). Patna: Bihar Hindi Granth Academy,
- Johnston, R.J. (2005). *Geography & Geographers: Anglo-American Human Geography since 1945*. London: Arnold
- Misra, R.P. (1983). *Contributions to Indian Geography Concepts and Approaches*. New Delhi: Heritage Publication.
- Peet, Richard (1978). *Radical Geography*. London: Methuen.
- Peet, Richard (1998). *Modern geographical thought*. London: Blackwell.
- Stoddart, D.R. (1981). *Geography, science and social concern*. Oxford: Blackwell.
- Taylor, G. (1953). *Geography in the 20th Century*. London: Methuen.
- Tripathi, M.P (1969). *Development of Geographic Knowledge in Ancient India*. Varanasi: Bharatiya Vidya Prakashan.



Gurugram University, Gurugram, Haryana (India)
M.A. Geography-I (Semester-II) Syllabus (as per NEP 2020 w.e.f. session 2026-27)
REGIONAL DEVELOPMENT AND PLANNING
With Special Reference to India
 Paper Code: CC-A07 (Theory: Core Paper)

Credit: 04 (3+1+0) L+T+P Hrs/Week	Total Marks	100
Time: 3 Hours	End Semester Exam:	70 Marks
Course Outcomes (COs): CO-01: The student will get familiarized with the theoretical foundations and conceptual grounding of Regional Planning and Development. CO-02: They will understand the relationship between Regional Planning and Geography through different concepts. CO-03: They will understand the concept of region in geography and objectives of Planning a region. CO-04: They will understand the importance and the practical approach of planning in India.	Internal Assessment:	30 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	20

Note:

The question Paper will have five units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining four units of question paper shall contain two essay type questions (having fourteen (14) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

UNIT-I

Regional Planning: Basic Concepts, Nature, Scope and Historical development; Selection of indicators and measures of regional disparities; Conceptual and theoretical framework: Concept of development, regional development; Regional planning in the Developed World and Regional Planning in Less Developed World.

UNIT-II

Geography and Regional Planning: Role of Geography in Regional development and planning; **Regional Growth Theories:** Friedman's core-periphery theory; Polarization and trickle-down effect theory of Hirschman; Growth Pole theory of Perroux.

UNIT-III

Regions for Planning: Concept of Regions: Types of Regions; Planning Region: Concept and Characteristics, Need and importance of Planning Region; Principles and objectives of Regional Planning; Planning Regions of India given by Town and Country Planning department; Problems and Prospects of Regional Planning in India.

UNIT-IV

Regional development and planning in India: Multi level planning (state, district, block and Panchayat level planning); Regional Policies in the Indian Five-Year Plans; Planning policies for regional development; NITI Aayog; Regional backwardness: criteria, strategy and programs for backward area development.



Suggested Readings:

- Bhatt, L.S. (1972). *Regional Planning in India*. Calcutta: Statistical Publishing Society.
- Chand, M and V.K. Puri (1985). *Regional Planning in India*. New Delhi: Allied Pub. Pvt. Ltd.
- Chandana, R.C. (2022). *Regional Planning and Development*. (in Hindi/Eng). New Delhi: Kalyani Publication
- Coates, B.R. and R.J. Johnston. (1977). *Geography and Inequality*. Oxford University Press.
- Friedmann, J. and William, Alonso. (1967). *Regional Development and Planning, a Reader*. Cambridge MA: MIT Press.
- Kant, Surya et al. (2004). *Reinventing Regional Development*. Jaipur: Rawat Publications.
- Maurya, S.D. (2020). *Regional Planning and Development*. (in Hindi). Prayagraj: Prawalika Publications.
- Misra R.P. et al. (1974). *Regional Development Planning in India*. New Delhi: Vikas.
- Mohan, Krishna (2005). *Addressing Regional Backwardness*. New Delhi: An Analysis of Area Development Programmes in India. Manak Publications.
- Raza, Moonis (1988). *Regional Development*. New Delhi: Heritage.
- Singh, Nina (2015). “Regional Backwardness in India: An Exploration of Demographic Indicators,” *Population Geography*.
- Singh, R.L. (1993). *India: A regional Geopgraphy*. National Geographical Society of India.
- Sundram, K. V. (1977). *Urban and Regional Planning in India*. New Delhi: Vikas Publishig House Pvt Ltd.



Gurugram University, Gurugram, Haryana (India)

M.A. Geography-I (Semester-II) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

Interpretation of Topographical sheets and Morphometric Analysis

Paper Code: CC-A08 (Practical: Core Paper)

Credit: 04 (0+0+8) L+T+P Hrs/Week		Total Marks	100
Time: 4 Hours	PE	End Semester Practical Exam:	70 Marks
Course Outcomes (COs): CO-01: Students will be able to understand the different types of Maps and will develop the skill of map interpretation through identification of physical and cultural features on Topographical sheets. CO-02: Students would be able to understand the usefulness of morphometric techniques in the case of a drainage basin.	PI	Internal Assessment: Attendance Practical assignment Sessional Exam	30 Marks (5) (5) (20)

Note: The question paper would be set from the syllabus covering the full content. The question paper for the written examination (4 hours duration) shall be made by the two external examiners in assistance with the internal examiner (who generally would be the course teacher). The answer books would be evaluated by the external and internal examiner on the day of examination. The question paper in this course will be divided into two parts.

Part-I will consist of 8 (eight) short answer type questions carrying 1 mark each.

Part-II will consist of 8 (eight) Choice based descriptive (long answer type) questions/exercises from the entire syllabus and carrying 8 (eight) marks each. Students will have to answer any 4 (four) questions/exercises.

Introduction to Maps: Definition and Types of Maps, Map scale,

Conventional Symbols, Importance and different Uses of maps.

Interpretation of Topographical maps: Topographical maps and their types,

Basic information on Topographical sheets, Identification of Physical and Cultural details on Survey of India Toposheets.

Morphometric Analysis of Drainage Basin- Types and its Geographical Significance,

Linear Aspects: Stream Ordering Based on Horton and Strahler,

Areal Aspects: Stream Frequency and Drainage Density.

Relief Aspects: Hypsometric Curve and Integral Hypsometric Curve, Clinographic Curve,

Slope Analysis- Average Slope (Wentworth's method), Relative Relief (Smith's method),

Profile Analysis –Serial, Superimposed, Projected, Composite, Cross and Longitudinal profile.

Total Minimum (25 Exercises)

Distribution of Marks: In Practical Paper, the marks would be divided as follows:

		Type	Marks and no. of questions	Marks	Marks	Total Marks
(a).	Written Examination	Part-I	1 Marks 8 questions	8	40	70
		Part-II	8 marks 4 questions	32		
		Viva-Voce				
	File Record				20	
(b).	Internal Assessment	Sessional Exam			20	30
		Practical Assignment			5	
		Attendance			5	
Total Marks =						100

Suggested Readings:

- Khullar, D.R. (2015). *Practical Geography*. Ludhiana: Kalyani Publishers.
- Mishra, R.N. and Sharma, P.K. (2020). *Prayogik Bhoogol* (in Hindi). Jaipur: Rawat Publications.
- Monkhouse, F.J. and Wilkinson, H.R. (1971). *Maps and Diagrams*. London: Methuen.
- Robinson A. H. (2009). *Elements of Cartography*. New York: John Wiley and Sons.
- Sarkar, A. (2015). *Practical Geography: A systematic approach*. New Delhi: Orient Black Swan Private Ltd.
- Sharma, J. P. (2020). *Prayogtmak Bhugol ki Rooprekha* (in Hindi). Meerut: Rastogi Publications.
- Singh, R. L. and P. K. Dutta (2012). *Prayogatmak Bhugol* (in Hindi). Allahabad: Central Book Depot.
- Singh R. L. and Rana P. B. Singh (1999). *Elements of Practical Geography*. (in Hindi). New Delhi: Kalyani Publishers.
- Taylor, D.R.F. (1985). *Education and training in contemporary Cartography*. John Willey.
- Yadav, H.L. (2000). *Fundamentals of practical Geography* (in Hindi). New Delhi: Radha Publication

Gurugram University, Gurugram, Haryana (India)

M.A. Geography-I (Semester-II) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

AGRICULTURE GEOGRAPHY

Paper Code: DSE-02 (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: The students will be able to understand different basic concepts of Agriculture Geography. CO-02: They will be able to classify determinants and types of Agriculture in different regions. CO-03: They will critically analyze the agricultural regionalization, the related major concepts and issues.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Agriculture Geography: Meaning, Nature, Scope; **Determinants of Agriculture:** Physical, Economic, Social and Technological Determinants; **Agricultural Region:** Concept, global classification; Agricultural Regions in India; Agro-Climatic Zones of India.

UNIT-II

Theories: Von Theunen's theory of Agriculture location; Weaver's theory of Crop Combination Techniques; Kendall's theory of Agricultural efficiency; Doi's theory of Crop diversification; Major Crops: Rice, Wheat, Cotton, Sugarcane, Maize;

UNIT-III

Green Revolution: Key aspects, challenges and mitigation; **Recent trends in Agriculture:** Organic farming, Agro-tourism, Biotechnology in agriculture, Community farming; National agricultural policy of India.

Suggested Readings:

- Bayliss Smith, T.P. (1987). *The Ecology of Agricultural Systems*. London: Cambridge University Press.
- Berry, B.J.L., Et al. (1976). *The Geography of Economic Systems*. New York: Prentice Hall.
- Brown, I.R. (1990). *The Changing World Food Prospects - The Nineties and Beyond*.
- Bryant, C.R. Johnston, T.R. (1992). *Agriculture in the City Countryside*. London: Belhaven Press.
- Burch, D. Gross, J. and Lawrence, G. (1999). *Restructuring Global and Regional Agriculture*. Burlington: Ashgate Publishing Company.
- Dyson, T. (1996). *Population and Food*. London: Global Trends and Future Prospects. Routledge.

- Grigg, D.B. (1984). *Introduction to Agricultural Geography*. London: Hutchinson.
- Ferroni, Marco, (2013). *Transforming Indian agriculture- India 2040: Productivity*. New Delhi: Markets and Institutions. Sage Publications.
- Mohammad, N. (1992). *New Dimension in Agriculture Geography*. Vol. I to VIII. New Delhi: Concept Publishing Company.
- Shafi, M. (2006). *Agricultural Geography*. Delhi: Pearson Education.
- Singh, J. and Dhillon, S.S. (1994). *Agricultural Geography*. New Delhi: Tata McGraw Hill.
- Singh, R. B. (2000). *Environmental Consequences of Agricultural Development: A Case Study from the Green Revolution state of Haryana, India, Agriculture, Ecosystems and Environment*.
- S. Gregor, H.P. (1970). *Geography of Agriculture*. New York: Prentice Hall.
- Tiwari, R. and Singh, B. (1994). *Krishi Bhoogol*.(in Hindi). Allahabad: Prayag Pustak Bhandar.



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M.A. Geography-I (Semester-II) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

POLITICAL GEOGRAPHY

Paper Code: DSE-02 (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs):	Internal Assessment:	25 Marks
CO-01: Students will be able to identify the Geography behind the Political boundary setup and Historical evolution and development of Political Geography.	Attendance	5
CO-02: They will understand the key concepts of Nation, State, Nationalism, etc.	Assignment	5
CO-03: They will know about the theoretical models related to Geopolitics and Geo-strategy, the current geopolitical issues and explain its significance in any region.	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Introduction to Political Geography: Definition, nature, and scope, Historical background, Relevance of Political Geography in International Relations; **Concepts in Political Geography:** Territory and territoriality, Concept of State and Nation, Nationalism, Geography of Federalism; Frontiers and Boundaries (with special reference to India), Buffer zones, Buffer states.

UNIT-II

Approaches of Political Geography: Whittlesey's landscape approach, Unified Field Theory; **Theories of Political Geography:** Heartland Theory (Halford J. Mackinder), Rimland Theory (Nicholas J. Spykman), Sea Power (Alfred Thayer Mahan), Seversky's Air power; Geo-politics in the post-cold war world.

UNIT-III

Contemporary Issues: Concept of Geopolitics, Geopolitics of World Natural Resources, Geopolitical Significance of the Indian Ocean, Regional Organizations-SAARC, ASEAN, OPEC, EU, G-7, G-20, BRICS, Geopolitical and strategic significance of India; **Electoral Reforms** in India, Determinants of Electoral Behavior.

Suggested Readings:

- Adhikari, S. (2012). *Political Geography of India*. Jaipur: Rawat Publication.
- Blacksell, Mark (2006). *Political Geography, Routledge Contemporary Human Geography Series*. London: Routledge.
- Cohen, Samuel (1964). *Geography and Politics in Divided World*. New York: Random House.
- Cox, K. (2002). *Political Geography: Territory, State and Society*, Wiley-Blackwell.
- De Blij, H. J. and Glassner, M. (1968). *Systematic Political Geography*. New York: John Wiley and Sons.
- Dikshit, R.D. (1987). *Political Geography and Geopolitics*. New Delhi: Tata McGraw Hill.
- Dikshit, R.D. (2000). *Political Geography: A Contemporary Perspective*. New Delhi: Prentice-Hall.
- Dikshit, S.K. (2007). *Rajnitik Bhoogol Avm Bhurajniti* (in Hindi). Varanasi: Vishwavidyalaya Parkashan.
- Dodds, Klaus (2007). *Geopolitics*. New York: Oxford University Press.
- Dwivedi R. L. (1996). *Political Geography*. Allahabad: Chaitanya Prakashan.
- Flint, Collin and Taylor, P.J. (2011). *Political Geography*. New Delhi: Pearson.
- Glassner, Martin Ira and Chuck Fahrer (2004). *Political Geography*. New Jersey: John Wiley.
- Jones, Martin, Rhys Jones and Michael Woods (2004). *An Introduction to Political Geography*. London: Routledge.
- K. Siddhartha (1998). *Nation State theory and Geopolitics: An introductory Political Geography*. Patna: Kisalaya Publication.
- Mackinder, Halford J. (1904). *The Geographical Pivot of History*. The Geographical Journal. Vol.23. No.4
- Moddie, A.E. (1961). *Geography Behind Politics*. London: Hutchinson.
- Moor, R. (1981). *Modern Political Geography*. London: McMillan.
- Pounds, N.J.G. (1972). *Political Geography*. New York: McGraw Hill Publication.
- Sexena, H.M. (2023). *Political Geography* (in Hindi). Meerut: Rastogi Publications.
- Manorama (1995). *Political Geography*. Allahabad: Horizon Publication.
- Singh, T. D. (1988). *Hind Mahasagar Avam Parimandaliya Rashtra. Ek Bhougolik Adhyayan* (in Hindi). Varanasi: Tara Book Agency.
- Sukhwal. B.L. (1987). *Modern Political Geography of India*. New Delhi: Sterling Publication.
- Taylor Peter (1985). *Political Geography*. London: Longman.

Gurugram University, Gurugram, Haryana (India)

M.A. Geography-I (Semester-II) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

SOCIAL AND CULTURAL GEOGRAPHY

Paper Code: **DSE-02** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: Students will be able to understand the basic concepts of social aspects of an area. CO-02: They will be able to understand and develop analytical skills to decode social aspect of society. CO-03: They will be able to acquaintanceship of development of cultural aspects in different regions and the patterns of cultural regions.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Social Geography: Meaning, Nature, Scope, development, Approaches and Significance; Social well-being and its indicators; Cultural Geography: Meaning, Nature, Scope, development, Approaches and Significance; Evolution and growth of Cultural groups.

UNIT-II

Major Concepts: Social Space, Social group, Social Structure, Social differentiation, social exclusion and social justice; Identity formation: role of Race, Language, Religion and ethnicity, Various economic activities and cultural adaptations.

UNIT-III

Social diversity and spatial distribution: Tribes, Caste and Linguistic groups; Origin of Spatial distribution of Race, Language and Religion; Patterns of World cultural regions Cultural Regions of India; Impact of Globalization and Cultural continuity.

Suggested Readings:

- Ahmad, Aijazuddin (1999). *Social Geography*. New Delhi: Rawat Publication.
- Blij. H.J. De (1993). *Human Geography*. New York: John Wiley and sons.
- Broek, J.C. and Webb, J.W. (1978). *A Geography of mankind*. New York: McGraw Hill.

- Crang, Mike (1998). *Cultural Geography*. London: Routledge publications.
- Dreze Jean and Amartya Sen (1996). *Economic Development and Social opportunity*. New Delhi: Oxford University Press,
- Dubey. S.C. (1991). *Indian Society*. New Delhi: National Book Trust.
- Gregory, D and J. Larry, (1985). *Social relations and spatial structures*. McMillan.
- Haimendorf, C.V.F. (1989): *Tribes of India: The Struggle for Survival*, Oxford University Press, Delhi. Reprint in 2023.
- Hazra (1997). *Dimensions in Human Geography*. Jaipur: Rawat Publication.
- Husain, Majid (2008). *Human Geography*. (in Hindi/Eng). Jaipur: Rawat Publication.
- Hutchinson, and Smith, D. (1996). *Ethnicity*. Oxford University press.
- Kosambi, D.D. (1992). *The culture and civilization of ancient India in historical outline*. New Delhi: Vikash Publishing.
- Massey, et.al. (1999). *Human Geography Today*. Cambridge: Polity Press.
- Maurya, S.D. (2022). *Human Geography*. (in Hindi/Eng). Prayagraj: Sharda Pustak Bhawan.
- Mukherjee, A.B. and Aijazuddin, A. (1985). *India: Culture, society and Economy*. New Delhi: Inter-India Publication.
- Rao, M.S.A. (1970). *Urban Sociology in India*. Orient longman.
- Singh, K.S. (1993). *People of India Vol I to XI*. New Delhi: Oxford University Press.
- Smith, David (1977). *Geography: A welfare approach*. London: Edward Arnold.
- Spencer, J.E. and Thomas, W.L. (1978). *Introduction to cultural Geography*. New York: John Wiley and Sons,



Gurugram University, Gurugram, Haryana (India)

M.A. Geography-I (Semester-II) Syllabus (as per NEP 2020 w.e.f. session 2026-27)

GEOGRAPHY OF NATURAL HAZARDS AND DISASTER MANAGEMENT

Paper Code: **DSE-02** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes:	Internal Assessment:	25 Marks
CO-01: Students will be able to understand the concept of Risk, Hazards and Disaster.	Attendance	5
CO-02: They will aware about the regional aspects of various Natural Hazards.	Assignment	5
CO-03: To learn about the assessment of Disaster losses and impacts, the mitigation and management in Disaster.	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Concept of Hazards, Risk Vulnerability and Disaster; **Disasters: Classification, Causes, Impacts:** Inter-relationship between Disasters and Development; Relevance of indigenous knowledge, appropriate technology and local resources.

UNIT-II

Types of Hazards- Natural Hazards: Earthquakes, Volcanoes, Floods, Cyclone, Tornado, Forest Fire, Landslides, Tsunami, and Droughts; Man Made Hazards; Disaster Losses and Impact, Disaster prevention, mitigation and preparedness.

UNIT-III

Natural Hazards and Disaster Risk Management: Plans and Policies, Natural Hazards and Disaster Relief: Water, Food, Sanitation, Shelter, Health, Waste Management; Challenges and issues of Natural Hazards and disaster management in India; Role of Remote Sensing and GIS in Natural Hazards and Disaster Management.

Suggested Readings:

- Allan, S., Et al. (2000). *Environmental Risks and the Media*. London: Routledge.
- Blaikie, P., Et al. (1994). *At Risk: Natural Hazards, People's Vulnerability and Disasters*. London: Routledge.
- Hewitt, K., (1997). *Regions of Risk: A Geographical Introduction to Disasters*. London: Longman.
- Godschalk, D.R. et. al. (1999). *Natural hazard Mitigation Recasting Disaster Policy and Planning*, Washington, D.C.: Island Press.
- Paraswamam, S. and Umikrishnan, P.V. (2000). *India Disaster Report*. New Delhi: Oxford University Press.
- Prasad, Nupur and Singh, Raj (2019). *Natural Hazards and Disaster Management*. Jaipur: Book Enclave.
- Singh, Nishant (2008). *Disaster Management*. (in Hindi). Delhi: Radha Publications.
- Singh, R.B. (2006). *Natural Hazards and Disaster Management: Vulnerability and Mitigation*. Jaipur: Rawat Publication.
- Schneid, T. and Collins, L. (1998). *Disaster Management and Preparedness*. Washington, D.C.: Lewis Publishers.
- Smith, Keith (1996). *Environmental Hazards: Assessing Risk and Reducing Disaster*. London. Routledge.



MA Geography 3rd Semester

Core Paper

Course Code	Course Title	Course Id	Credit
CC-A09	Population and Settlement Geography (Theory Paper)		4
CC-A10	Principles of RS, GIS and GPS (Theory Paper)		4
CC-A11	Fundamentals of Remote Sensing (Practical Paper)		4

&

DSE Paper (Optional)

(Note: Students have to opt any One of the following)

Course Code	Course Title	Course Id	Credit
DSE-03	i. Geography of Tourism (Theory Paper)		3
	ii. Economic Geography (Theory Paper)		3
	iii. Arid Geomorphology (Theory Paper)		3
	iv. Geography of Water Resource (Theory Paper)		3



Gurugram University, Gurugram, Haryana (India)
M.A. Geography (Semester-III) Syllabus (as per NEP 2020 w.e.f. session 2024-25)

POPULATION AND SETTLEMENT GEOGRAPHY

Paper Code: CC-A09 (Theory: Core Paper)

Credit: 04 (3+1+0) L+T+P Hrs/Week	Total Marks	100
Time: 3 Hours	End Semester Exam:	70 Marks
Course Outcomes (COs): CO-01: Students will be able to understand the Meaning, Basic Concepts and Data sources of Population. CO-02: Students will be able to understand the distribution, dynamics and theories of population. CO-03: It will help students to gain a better understanding about the Concept, types and Patterns of Rural Settlement. CO-04: Students will know about the origin, development and types of Urban settlements.	Internal Assessment:	30 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	20

Note:

The question Paper will have five units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining four units of question paper shall contain two essay type questions (having fourteen (14) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

UNIT-I

Population Geography: Concept, Nature, Scope, Approaches and Relationship with Social Sciences. Population Data Sources and their level of reliability; Fertility, Morbidity and Mortality Analysis: Indices, Determinants and World Pattern; Migration.

UNIT-II

Population: Factors affecting distribution, Distribution, Density and Growth pattern; Population Composition: (Age & Sex, Rural-Urban, Literacy and Occupational Structure); Theories of Population: Malthus, Ricardo, Optimum Population and Demographic Transition.

UNIT-III

Settlement Geography: Concept, Nature, Scope and Historical Development; Settlement: Rural and Urban; Rural settlements: Types, Patterns and Distribution; Problems associated with Rural and Urban Settlements and Planning.

UNIT-IV

Urban Settlements: Concept, Origin and Development, Classification and Morphology; Urbanization in Developed and Developing countries; Concept of Megacities and smart cities.



Suggested Readings:

- Alam, S. M. Et al. (1982). *Settlement System of India*. New Delhi: Oxford and IBH Publication Co.
- Bansal, S.C. (2010). *Urban Geography (Hindi/Eng)*. Meerut: Meenakshi Prakashan.
- Bansal, S.C. (2021). *Rural Settlement Geography (Hindi)*. Meerut: Meenakshi Prakashan.
- Beall, Jo and Sean Fox. (2009). *Cities and Development*. London: Routledge.
- Chandana, R.C. (2015). *Geography of Population (Hindi/Eng)*. New Delhi: Kalyani Publishers.
- Ghosh, B.N. (1985). *Fundamentals of Population Geography*. New Delhi: Sterling Publishers Pvt. Ltd.
- Ghosh, S. (1999). *A Geography of Settlements*. Kolkata: Orient Longman.
- Hall, Tim and Heather Barrett (2012). *Urban Geography*. London: Routledge.
- Hassan, M.I. (2007). *Population Geography*. Jaipur: Rawat Publication.
- Mandal, R.B. (2001). *System to Rural Settlements in Developed Countries*. New Delhi: Concept Publication.
- Maurya, S.D. (2022). *Population Geography (Hindi)*. Allahabad: Sharda Pustak Bhawan.
- Maurya, S.D. (2020). *Settlement Geography (Hindi/Eng)*. Allahabad: Sharda Pustak Bhawan.
- Misra, H.N. (1987). *Rural Geography: Contributions to Indian Geography*. New Delhi: Heritage Publishers.
- Panda, B.P. (2002). *Population Geography (Hindi)*. Bhopal: Hindi Granth Academy.
- Ramachandran, R. (1989). *Urbanisation and Urban Systems in India*. New Delhi: Oxford.
- Saxena, P.K. (2022). *Settlement Geography (Hindi)*, Kindle Edition, Laxmi Publications Pvt Ltd.
- Singh, Ramyagya (2005). *Adhivas Bhoogol (Hindi)*. Jaipur: Rawat Publications.
- Tiwari, R.C. (2020). *Settlement Geography*. Allahabad: Pravalika Publications.
- Tripathi, R.D. (2005). *Population Geography*. Gorakhpur: Vasundhara Parkashan.



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PRINCIPLES OF RS, GIS AND GPS

Paper Code: CC-A10 (Theory: Core Paper)

Credit: 04 (3+1+0) L+T+P Hrs/Week	Total Marks	100
Time: 3 Hours	End Semester Exam:	70 Marks
Course Outcomes (COs): CO-01: The students will be familiarized and enhance their knowledge about the fundamentals of Photogrammetry. CO-02: They will understand the Remote Sensing technique and its Process of data acquisition. CO-03: They will aware about the Geographical location, its significance and various Satellites series. CO-04: They will know the use of GIS technology in Earth Observation and intensive real-world study.	Internal Assessment:	30 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	20

Note:

The question Paper will have five units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining four units of question paper shall contain two essay type questions (having fourteen (14) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

UNIT-I

Photogrammetry: Concept, Historic Development, Advantages and Limitations; Aerial Photography: Types, Ground Coverage and Overlapping; Aerial Photographs: Types, Characteristics, Geometry and Scale, Photo mosaic; Stereoscope and Stereo-Vision; Drone Aerial Photography; Elements of Image interpretation.

UNIT-II

Remote Sensing: Concept, Process, Stages, Historic Development, Platforms and Sensors. Electromagnetic Radiation (EMR): Electromagnetic Spectrum, Interaction of EMR with Surface, Interaction of EMR with Atmosphere. Scattering: Types and Significance; Remote Sensing and GIS.

UNIT-III

GPS: Introduction to Global Positioning System, Coordinate Systems, GPS Satellite Constellations, GPS Segments; IRNSS location system; Application and Significance of GPS. **Satellite:** Swath, Orbits- Sun Synchronous and Geostationary; Major Satellite Series: India and World; Resolution; Space Programs of India.



UNIT-IV

GIS: Concept, Component, Significance of GIS; GIS Data types: Spatial and Non-Spatial; Data Formats: Raster and Vector; Digital Satellite Image: Panchromatic, FCC and TCC; Recent Trends in GIS: Cloud GIS, 3-D GIS, Mobile GIS, Significance of Machine Learning and Deep Learning; Application of Geospatial Techniques: LULC, Urban Planning, Agriculture, Hydrology, Networking and Disaster Management.

Suggested Readings:

- Bhatta, B. (2021). *Remote Sensing and GIS*. New Delhi: Oxford University Press.
- Chang, Kang-tsung (2020). *Introduction to Geographic Information Systems*. New Delhi: Tata McGraw Hills Publishing Company Ltd.
- Chauhan, T.S. (2024). *Geospatial Technology fundamentals and applications*. New Delhi: Scientific Publishers.
- Chaunial, D.D. (2021). *Principles of Remote Sensing and Geographical Information System*. (Hindi). Allahabad: Sharda Pustak Bhawan.
- Doberstein, Dan (2011). *Fundamentals of GPS Receivers: A Hardware Approach*. New York: Springer.
- Emayavaramban, V. (2017). *Geospatial Technology fundamentals and applications*. New Delhi: New India Publishing Agency.
- Fazal, Shahab (2008). *GIS Basics*. New Delhi: New Age International Publishers.
- Ganesh, A. (2006). *Applications of Geospatial Technology*. Delhi: Satish Serial Publishing House.
- Guha, Pardeep (2013). *Remote Sensing for the Beginner*. New Delhi: East West Press.
- Heywood, Ian et. Al. (2002). *Geographical Information Systems*. Delhi: Pearson Education.
- Joseph, George (2018). *Fundamental of Remote Sensing*. Hyderabad: University's Press (India) Pvt. Ltd.
- Lillesand and R.W. Kiefer (2005). *Remote Sensing and Image Interpretation*. New York: John Wiley and Sons.
- Nar, Dharna and Kotecha, R. (2024). *Drone Technology for Beginners*. New Delhi: Ane Books Pvt. Ltd. And Drone School India.
- Panda, B.C. (2008). *Remote Sensing: Principles and Applications*. New Delhi: Viva Books Pvt. Ltd.
- Pritvish Nag, and M. Kudrat (1998). *Digital Remote Sensing*. New Delhi: Concept Publishing Company.
- Rampal, K.K. (1999). *Handbook of Aerial Photography and Interpretation*. New Delhi: Concept Publishing Co.
- Reddy, Anji, M. (2012). *Textbook of Remote Sensing and Geographical Information Systems*. Hyderabad: BSP B.S. Publications.
- Sharma, R.K.(2010). *Air Photos Interpretation, Remote Sensing and Geographical Information System*. Udaipur: Himanshu Publications.
- Siddiqui, M.A. (2011). *Introduction to Geographical Information Systems*. Allahabad: Sharda Pustak Bhawan.
- Simhachalam, A. (2021). *Application of Geo-Spatial Technologies in Natural Resource Management*. New Delhi: Akansha Publishing House.



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FUNDAMENTALS OF REMOTE SENSING

Paper Code: CC-A11 (Practical: Core Paper)

Credit: 04 (0+0+8) L+T+P Hrs/Week		Total Marks	100
Time: 4 Hours	PE	End Semester Practical Exam:	70 Marks
Course Outcomes (COs): CO-01: Acquisition of skills of functions and measurements on various aerial photographs. CO-02: Capability of reading and interpreting physical and socio-economic features on photographs. CO-03: Acquaintance with different digital data products and software for the processing of satellite data. CO-04: Enhancement of skills about processing and extracting features from satellite imageries.	PI	Internal Assessment: Attendance Practical assignment Sessional Exam	30 Marks (5) (5) (20)

Note:

The students have to prepare two Practical files: One Practical file from PART-A on Geographical Practical Sheets and the Second will be computer based comprehensive practical file from PART-B.

The question paper would be set from the syllabus covering the full content. The question paper for the written examination (4 hours duration) shall be made by the two external examiners in assistance with the internal examiner (who generally would be the course teacher). The answer books would be evaluated by the external and internal examiner on the day of examination. The question paper in this course will be divided into two parts.

Part-I will consist of 8 (eight) short answer type questions carrying 1 (one) mark each.

Part-II will consist of 8 (eight) Choice based descriptive (long answer type) questions/exercises from all parts and carrying 8 (eight) marks each by selecting equal questions from all parts. Students will have to answer 4 (four) questions/exercises by selecting 1 (one) from each part on mandatory basis.

PART A: PAPER SHEET BASED PRACTICAL FILE

1. Aerial Photographs: Types, Scale Determination, Identification of Fiducial Marks, Principal Point, Conjugate Principal Point, ASL, AGL, Flight line and overlapping.
2. Aerial Photography- Drone (UAV): Types, Structure and Components, Controls.
3. Identification of five Physical and five Cultural features on Aerial Photographs.
4. Land use/ Land cover mapping on Aerial Photographs.
5. Stereo-Vision and Stereographs, Photo mosaic.
6. 3-D terrain Analysis on Stereo-pair Aerial Photographs



PART B: DIGITAL PRACTICAL FILE

1. Satellite Imagery Types; Annotation of Satellite imagery; Annotation, Data Acquisition/ Downloading from ISRO-Bhuvan/Bhoonidhi, Google Earth, GLOVIS/ USGS etc.
2. GPS and GCP Point Capturing from a GPS device and mobile.
3. Familiarisation with Geo-Spatial Softwares: Arc-GIS, QGIS (Open Source) etc.; Georeferencing by adding GCP's and Projection on Satellite images and Toposheet; Preparation of FCC; Comparison of Features on Panchromatic, True Colour and FCC.
4. Vector Creation from Raster (Toposheet and Satellite Imagery): Point, Line and Polygon; Online Vector Creation on OSM and ISRO-Bhuvan/Bhoonidhi.
5. GPS and Total Station Surveying.

Distribution of Marks: In Practical Paper, the marks would be divided as follows:

		Type	Marks and no. of questions	Marks	Marks	Total Marks
(a).	Written Examination	Part-I	1 Marks 8 questions	8	40	70
		Part-II	8 marks 4 questions	32		
	Viva-Voce				10	
	File Record				20	
(b).	Internal Assessment	Sessional Exam			20	30
		Practical Assignment			5	
		Attendance			5	
Total Marks =						100

Suggested Readings:

- Bhatta, B. (2021). *Remote Sensing and GIS*. New Delhi: Oxford University Press.
- Chang, Kang-tsung (2020). *Introduction to Geographic Information Systems*. New Delhi: Tata McGraw Hills Publishing Company Ltd.
- Chauhan, T.S. (2024). *Geospatial Technology fundamentals and applications*. New Delhi: Scientific Publishers.
- Chaunial, D.D. (2021). *Principles of Remote Sensing and Geographical Information System*(Hindi). Allahabad: Sharda Pustak Bhawan.
- Doberstein, Dan (2011). *Fundamentals of GPS Receivers: A Hardware Approach*. New York: Springer.
- Emayavaramban, V. (2017). *Geospatial Technology fundamentals and applications*. New Delhi: New India Publishing Agency.
- Gopi, S., Sathikumar, R. And Madhu, N. (2006). *Advanced Surveying: Total Station, GIS and Remote Sensing*. Chennai: Pearson Education.
- Heywood, Ian et. Al. (2002). *Geographical Information Systems*. Delhi: Pearson Education.
- Lillesand and R.W. Kiefer (2005). *Remote Sensing and Image Interpretation*. New York: John Wiley and Sons.
- Mishra, R.N. and Sharma, P.K. (2019). *Prayogic Bhoogol* (Hindi). Jaipur: Rawat Publications.
- Nar, Dharna and Kotecha, R. (2024). *Drone Technology for Beginners*. New Delhi: Ane Books Pvt. Ltd. And Drone School India.
- Rampal, K.K. (1999). *Handbook of Aerial Photography and Interpretation*. New Delhi: Concept Publishing Co.
- Reddy, Anji, M. (2012). *Textbook of Remote Sensing and Geographical Information Systems*. Hyderabad: BSP B.S. Publications.
- Sharma, R.K.(2010). *Air Photos Interpretation, Remote Sensing and Geographical Information System*. Udaipur: Himanshu Publications.
- Siddiqui, M.A. (2011). *Introduction to Geographical Information Systems*. Allahabad: Sharda Pustak Bhawan.

- Simhachalam, A. (2021). *Application of Geo-Spatial Technologies in Natural Resource Management*. New Delhi: Akansha Publishing House.
- Yeswanth, I.V.S. and Kumar, A.V.S.S. (2024). *Fundamentals of Drone Technology*. Bilaspur (CG): Authers Click Publishing.



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GEOGRAPHY OF TOURISM

Paper Code: **DSE-03 (i)** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: The students will be able to understand the basic concepts of tourism and its types. CO-02: They will have a closer insight to Tourism Products and associated infrastructure. CO-03: They will be able to aware about the effectiveness of Tourism on social and cultural phenomenon and develop skills to decode the role of Tourism in global integration.	Internal Assessment: Attendance Assignment Sessional Exam	25 Marks 5 5 15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Geography of Tourism: Concept, Nature, Scope, Patterns and Trends; Geographical basis of Tourism; Motivating Factors of Tourism; Types and Classification: Recreational, Religious and Historical; Tourism Circuits.

UNIT-II

Tourism Product & Infrastructure: Transportation, Accommodation, Supplementary Accommodation, Basic Infrastructure; Tourism as an Industry; Tour Agencies and Intermediaries; Impact of Tourism: Physical, Economic and Social-Cultural (Positive and Negative).

UNIT-III

Tourism Paradigms: Cultural Tourism, Heritage Tourism, Geo-Tourism, Eco-Tourism, Medico-Tourism, Aggro-Tourism, Responsible Tourism, Regional Dimensions of Tourism in India, Tourism Trends and Development- National & International.

Suggested Readings:

- Baghla, S. (2017). *Tourism Geography*. Jaipur: Book Enclave Publishers.
- Bansal, Suresh Chander (2011). *Tourism Geography and Travel Management*. Meerut: Minakshi Publication.
- Bhatia A.K. (2019). *Tourism Development: Principles and Practices*. New Delhi: Sterling Publishers.
- Carter, E and G. Lowman (1994). *Ecotourism*. New York: John Wiley and Sons.
- Chandra R.H. (1998). *Hill Tourism: Planning and Development*. New Delhi: Kanishka Publishers.
- Hunter, C. and Green, H. (1995). *Tourism and the Environment: A Sustainable Relationship*. London: Routledge.
- Kamra K.K. and Mohinder Chand (2007). *Basics of Tourism: Theory, Operation and Practice*. New Delhi: Kanishka Publishers.
- Kaur J. (1985). *Himalayan Pilgrimages & New Tourism*. New Delhi: Himalayan Books.
- Kapoor, Bimal Kumar (2012). *Tourism Geography*. New Delhi: Visavbharti Publication.
- Lea J. (1988). *Tourism and Development in the Third World*. London: Routledge.
- Maurya, S.D. and Kumar, P. (2022). *Paryatan Bhugol (Hindi)*. Paryagraj: Sharda Pustak Bhawan.
- Milton D. (1993). *Geography of World Tourism*. New York: Prentice. Hall.
- Parveen, Noshaba (2019). *Geography of Tourism Ek Adhayan (Hindi)*. New Delhi: RK Books.
- Sharma J.K. (2013). *Tourism Planning and Development - A New Perspective*. New Delhi: Kanishka Publishers.
- Sharma, S.K. (2021). *Geography in Tourism (Hindi)*. New Delhi: Takshshila Publication.
- Williams Stephen (1998). *Tourism Geography*. London: Routledge.



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ECONOMIC GEOGRAPHY

Paper Code: **DSE-03 (ii)** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: Provides understanding about the meaning and concept of Economic Geography and with global agriculture systems and location theories. CO-02: Acquaintance with the spatial organization of world economies and economic growth models. CO-03: Knowledge about trade blocs, trends in trade and various processes of Globalization.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Economic Geography: Concept, Nature, Scope, Approaches and Recent Trends in Economic Geography; Relationship of Economic Geography with other Social Sciences; Economic Activities and their Classification.

UNIT-II

Agriculture Systems of World; Von Thunen's Model of Agricultural Land Use; Industrial Location Theories of Weber and Smith; Friedmann's Core Periphery Model; Rostow's Model of Economic growth; Perroux's Growth Pole Theory, Major Resources: Renewable and Non-Renewable Resources.

UNIT-III

World Economies: Characteristics of Developed and Developing Countries; Neo Liberalism, Globalization, International Trade Patterns and Trends; Emerging Global New World Order; Trade war: Tariff and Free Trade; EXIM policy of India; Geographical Configuration of World Trade: GATT, WTO, SAFTA, G-20, BRICS.



Suggested Readings:

- Anderson, William P. (2012). *Economic Geography*. New York: Rotledge.
- Broadford, M.G. and Kent, W.A. (1977). *Human Geography: Theories and their Application*. Oxford University Press.
- Gautam, A. (2010). *Advanced Economic Geography*. Allahabad: Sharda Pustak Bhawan.
- Gautam, Alka, (2010). *Aarthik Bhugol Ke Mool Tatav* (Hindi). Allahabad: Sharda Pustak Bhavan.
- Hamilton, I. (1992). *Resources and Industry*. New York: Oxford University Press.
- Haroon, M. (2005). *Economic Geography* (Hindi). Gorakhpur: Vasundhara Prakasan.
- Hartshorne, T. A. and Alexander, J. W. (2001). *Economic Geography*. New Delhi: Prentice Hall of India.
- Hudson, R. (2005). *Economic Geography*. New Delhi: Sage Publication.
- Jones, C. F. and Darkenwald, G. G. (1965). *Economic Geography*. New York: The Macmillan and Company.
- Knox, P. (2003). *The Geography of World Economy*. London: Arnold.
- Losch, A. (1954). *The Economics of Location*. London: Yale University Press.
- Misra. H.N. (2014). *Managing Natural Resources Focus on Land and Water*. New Delhi: Prentice Hall.
- Rostow, W.W. (1991). *The Stages of Economic Growth: A Non-Communist Manifesto*. London: Cambridge University Press.
- Saxena, H.M. (2013). *Economic Geography*. Jaipur: Rawat Publications.
- Wheeler, J.O. and Muller, P.O. (1985). *Economic Geography*. New York: John Wiley and Sons.



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ARID GEOMORPHOLOGY

Paper Code: **DSE-03 (iii)** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: The students will be able to understand the concepts of Arid Geomorphology and Arid Regions. CO-02: They will understand the general Erosional Processes and the formation of arid landforms. CO-03: They will be able to explain Depositional work and landforms created in arid region and the human impact on Arid landforms and regional desertification.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Mid-Sem. Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Arid Geomorphology: Meaning, Nature and Historical Development; Age of Aridity on Earth: Causes of Aridity- Climate, Atmospheric Stability and Continentality; Arid Regions: Meaning, Types, Geo-spatial distribution.

UNIT-II

Wind Erosion: Process-Abrasion, Attrition, Deflation and Aerodynamic Erosion; Factors Affecting Erosion; Wind Eroded Arid Landforms, Water Eroded Arid Landforms; Transportation Work: Saltation, Surface Creep, Suspension, Wind Depositional work: Factors Affecting Deposition; Depositional landforms.

UNIT-III

Weathering in Arid Regions, Mass Wasting: Surface creep, landslides and debris flow, rock falls etc. Changing arid landscapes: Urbanization, Agriculture, Deforestation, Overgrazing, Tourism; Desertification: Natural and Human Processes; Case study: The Thar Desert, The Sahara Desert.



Suggested Readings:

- Andrew, S. G. (2013). *Arid and Semi-Arid Geomorphology*. Cambridge (UK): Cambridge University Press.
- Anherf, F. (1996). *Introduction to Geomorphology*. London: Arnold.
- Bloom, A.L. (2022): *Geomorphology*, Second Edition. Jaipur: Rawat Publications.
- Chorley, R. J., Schumm, S. A. and Sugden, D. E. (1984). *Geomorphology*. London: Methuen.
- David, S.G. Thomas (2011). *Arid Zone Geomorphology: Process, Form and Change in Drylands*. Oxford: John Wiley & Sons Ltd.
- Dayal, P. (2019). *Geomorphology* (Hindi/Eng). New Delhi: Rajesh Publications.
- Donald, O. Doehring (2020). *Geomorphology in Arid Regions*. London: Routledge.
- Kale, V. and Gupta, A. (2001). *Introduction to Geomorphology*. Kolkata: Orient Longman.
- Kaushik S.D. (2010). *Geomorphology* (Hindi). Meerut: Rastogi Publication.
- Ritter, D.F., Kochel, R.C., Miller, J.R. (1995). *Process Geomorphology*. Chicago: Wim. C. Brown Publishers.
- Singh Savindra (2020). *Geomorphology* (Hindi/Eng). Allahabad: Pravalika Publications.
- Strahler, A.N. and Strahler, A.H. (1996). *Introducing Physical Geography*. New York: John Willey and Sons.
- Thornbury, W.D. (2004). *Principles of Geomorphology*. New Delhi: CBS Publishers and Distributors.



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GEOGRAPHY OF WATER RESOURCE

Paper Code: **DSE-03 (iv)** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: The students will understand the concepts, significance and distribution of water resource. CO-02: The students will be able to assess the surface water, estimate stream flow and rainfall. CO-03: They will be able to understand the concept of underground water, its issues and planning.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Geography of Water Resource: Concept, Nature, Scope, Approaches, Historical Development and Significance; Relationship with Other Disciplines; Hydrological Cycle; Global water Distribution and Water Crises; Climate and Water Resource.

UNIT-II

Surface Water- Rainfall: Frequency, Intensity, Trends, Measurement, Variability, Patterns and Distribution; Run Off Estimation; **Ground Water:** Concept, Occurrence, Water level Zones, Aquifer-Fundamentals, Types and significance; Underground Groundwater Stressed Blocks of India; **Groundwater Recharge Techniques:** Traditional and Modern- Surface Runoff Harvesting, Rooftop Rainwater Harvesting.

UNIT-III

Water Balance: Water Demand, Water Use and Water Balance in different sectors (Agriculture, Industrial and Domestic) of India; **Water Issues:** Water Deficiency; Degradation of Water Quality-Physical, Chemical and Biological; Water logging; Water Conflict among states of India; Application of GIS in Water Resource. Water Policy of India.



Suggested Readings:

- Aggarwal, Anil and Sunita Narain (1997). *Dying Wisdom: Rise, Fall and Potential of India's Traditional Water Harvesting System*. New Delhi: Centre of Science and Environment.
- Chorley, R.J. (1979). *Water, Earth and Man*. London: Methuen.
- Digman, L.S. (2002). *Physical Hydrology*. New Jersey: Prentice Hall.
- Garg, S.K. (1988). *Hydrology and Water Resources Engineering*. Delhi: Khanna Publishers.
- Gurjar RK and Jat B.C. (2013). *Geography of Water Resources*. Jaipur: Rawat Publications.
- Jones, J.A.(1997). *Global Hydrology, Processes, Resources and Environmental management*. New York: Longman.
- Manning, J.C. (1997). *Applied Principals of Hydrology*. New Jersey: Prentice Hall.
- Patra K.C. (2010). *Hydrology and Water Resource Engineering*. New Delhi: Norsa Publishing House.
- Mishra, S.P. (2007). *Jal Sansadhan Prabandhan Evm Sanrakshan* (Hindi). Jaipur: Awishkar Publishers and Distributers.
- Mather, J.R. (1984). *Water Resources Distribution, Use and Management*. New York: John Wiley.
- Raghunath, H.M. (2015). *Hydrology*, New Delhi: New Age International Pvt Ltd.
- Reddy, J. P. (2016). *A Textbook of Hydrology*. New Delhi: Laxmi Publication., New Delhi.
- Singh, M. B. (1999). *Climatology and Hydrology* (Hindi). Varanasi: Tara Book Agency.
- Subramanya K. (2017). *Engineering Hydrology*. New Delhi: Tata McGraw-Hill Publishing Co. Ltd.
- Tideman, E.M. (1996). *Watershed Management, Guidelines for Indian Conditions*. New Delhi: Omega Scientific Publishers.
- Ward, R.C. and Robinson, M. (2000). *Principles of Hydrology*. NewYork: McGraw Hill.



MA Geography 4th Semester

Core Paper

Course Code	Course Title	Course Id	Credit
CC-A12	Research Methodology (Theory Paper)		4
CC-A13	Applications of Geo-Spatial Techniques (Practical Paper)		4

&

DSE Paper (Optional)

(Note: Students have to opt any One of the following)

Course Code	Course Title	Course Id	Credit
DSE-04	i. Industrial Geography (Theory Paper)		3
	ii. Gender Geography (Theory Paper)		3
	iii. Crime Geography (Theory Paper)		3
	iv. Natural Resource Management (Theory Paper)		3



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RESEARCH METHODOLOGY

Paper Code: CC-A12 (Theory: Core Paper)

Credit: 04 (3+1+0) L+T+P Hrs/Week	Total Marks	100
Time: 3 Hours	End Semester Exam:	70 Marks
Course Outcomes (COs): CO-01: The students will be able to understand the concept, types of Research and Research problem identification. CO-02: They will develop the skill of literature review, Hypothesis formation and selection of Methodology. CO-03: They will know about various data sources and their collection methods for the research. CO-04: They will aware about Research process, Report writing and publication in a scientific way.	Internal Assessment: Attendance 5 Assignment 5 Sessional Exam 20	30 Marks

Note:

The question Paper will have five units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining four units of question paper shall contain two essay type questions (having fourteen (14) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

UNIT-I

Research: Concept, Purpose, Types and Approaches; Scientific Research in Geography: significance and Analytical steps; Identification of Research Problem: Aims, Objectives; Formulation of Research Question; Limitations of Research.

UNIT-II

Review of Literature: Meaning, Significance, Sources, Process, Web Based Searching, Research Gaps; Hypothesis: Meaning, Significance, Formulation, Types and Testing; Methodology: Inductive and Deductive, Qualitative and Quantitative.

UNIT-III

Data Sources and Methods of Data Collection: Types of data-(Primary and Secondary); Secondary Data Sources; Primary Data Sources: Field Survey Data Collection Techniques- Observation, Interview, Questionnaire, Schedule, PRA; Data Processing and Analysis: Tabulation and Graphic/Map Representation.



UNIT-IV

Research Report Writing: Structure-(Preliminary, Main Body of Text and Conclusion); Referencing and Bibliography: Style and Writing- APA, Chicago, Harvard; Publication in Research Journals; Ethics in Research; Plagiarism in Research; Application of GIS in Research.

Suggested Readings:

- Ahuja, Ram (2003). *Social Survey and Research* (Hindi). Jaipur: Rawat Publications.
- Basotia, G. R. and Sharma, K. K. (2002). *Research Methodology*. Jaipur: Mangal Deep Publications.
- Creswell J. (2018). *Research Design: Qualitative and Quantitative Approaches*. New Delhi: Sage Publications.
- Eyles, John and David M. Smith (1988). *Qualitative Methods in Human Geography*. Oxford: Polity Press.
- Flowerdew, R. and Martin, D. (1997). *Methods in Human Geography. A Guide for Students Doing a Research Project*. New Jersey: Prentice Hall.
- Gupta, S.P. (2021). *Statistical Methods*. New Delhi: Sultan Chand and Sons.
- Harvey, David (1969). *Explanation in Geography*. London: Edward Arnold.
- Limb, M. (2001). *Qualitative Methodologies for Geographers. Issue and Debates*. London: Edward Arnold.
- Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.
- Kumar, Ranjit (2005). *Research Methodology: Step by Step Guide for Beginners*. Pearson, Australia.
- Limb, Melanie and Claire Dwyer (2001). *Qualitative Methodologies for Geographers*. London: Arnold.
- Mahmood, A. (2020). *Statistical Methods in Geographical Studies*. New Delhi: Rajesh Publications.
- Misra, H.N. and Singh, Vijai P. (2002). *Research Methodology in Geography: Social, Spatial and Policy Dimensions*. Jaipur: Rawat Publications.
- Misra, R.P. (2015). *Research Methodology: A handbook*. New Delhi: Concept Publishing Company.
- Paul Oliver (2004). *Writing your Thesis*. New Delhi: Vistar Publication.
- Robinson, Guy M. (1998). *Methods and Techniques in Human Geography*. New York: John Wiley.
- Somekh, Bridget and Cathy Lewin (2005). *Research Methods in the Social Sciences*. New Delhi: Vistar Publications.
- Stoddard, R. H. (1982). *Field Techniques and Research Methods in Geography*. Kendall/Hunt.
- Wolcott, H. (1995). *The Art of Fieldwork*. California: Alta Mira Press.



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APPLICATIONS OF GEO-SPATIAL TECHNIQUES

Paper Code: CC-A13 (Practical: Core Paper)

Credit: 04 (0+0+8) L+T+P Hrs/Week		Total Marks	100
Time: 4 Hours	PE	End Semester Practical Exam:	70 Marks
Course Outcomes (COs): CO-01: The students will be able to understand the Geospatial Technology, GIS and types of GIS Data. CO-02: They will develop the Capability of Mapping through Satellite Images. CO-03: Acquaintance with different digital data products and software for the processing of satellite data. CO-04: Enhancement of skills about processing, extracting features and functions on satellite images.	PI	Internal Assessment: Attendance Practical assignment Sessional Exam	30 Marks (5) (5) (20)

Note:

- The students have to prepare a comprehensive computer based practical file covering all the topics of entire syllabus.
- The question paper would be set from the syllabus covering the full content. The question paper for the written examination (4 hours duration) shall be made by the two external examiners in assistance with the internal examiner (who generally would be the course teacher). The answer books would be evaluated by the external and internal examiner on the day of examination. The question paper in this course will be divided into two parts.

Part-I will consist of 8 (eight) short answer type questions carrying 1 (one) mark each.

Part-II will consist of 8 (eight) Choice based descriptive (long answer type) questions/exercises from the entire syllabus and carrying 8 (eight) marks. Students will have to answer any 4 (four) questions/exercises.

- Geo-Spatial Technology: Concept and Significance;
- GIS: Components, Data Types- Spatial and Non-Spatial, Data Formats- Raster and Vector;
- Satellite Images: Types, Acquisition, Classification and Significance in Various Fields;
- Digitization: Point, Line and Polygon; Vector Creation on Raster: Toposheet and Satellite Image;
- Map Layout through GIS Software: QGIS (Open Source) or Arc-GIS Software etc.; Map Components; Key Map Creation of Study Area;
- Attribute Data Integration with Vector Data; Diagrammatically Presentation of Attribute Data: Dot map, Choropleth map, Isopleths map, Contour, Pie Diagram, Sphere Diagram, Bar graph and Line graph;

- Digital Classification of Satellite Data: Supervised and Unsupervised;
- Application of Geospatial Techniques: in LULC, Urban, Agriculture, Water Bodies study, Networking, Disaster Management;
- Area Calculation;
- Buffer Analysis: Single and Multiple.
- Overlay analysis;
- DEM creation and Terrain Analysis.

Total Minimum (25 Exercises)

Distribution of Marks: In Practical Paper, the marks would be divided as follows:

		Type	Marks and no. of questions	Marks	Marks	Total Marks
(a).	Written Examination	Part-I	1 Marks 8 questions	8	40	70
		Part-II	8 marks 4 questions	32		
		Viva-Voce				
	File Record				20	
(b).	Internal Assessment	Sessional Exam			20	30
		Practical Assignment			5	
		Attendance			5	
Total Marks =						100

Suggested Readings:

- Bhatta, B. (2021). *Remote Sensing and GIS*. New Delhi: Oxford University Press.
- Chang, Kang-tsung (2020). *Introduction to Geographic Information Systems*. New Delhi: Tata McGraw Hills Publishing Company Ltd.
- Chauhan, T.S. (2024). *Geospatial Technology fundamentals and applications*. New Delhi: Scientific Publishers.
- Chaunial, D.D. (2021). *Principles of Remote Sensing and Geographical Information System*(Hindi). Allahabad: Sharda Pustak Bhawan.
- Emayavaramban, V. (2017). *Geospatial Technology fundamentals and applications*. New Delhi: New India Publishing Agency.
- Graser, Anita (2016). *Learning QGIS*. Birmingham: Packt Publishing Ltd.
- Heywood, Ian et. Al. (2002). *Geographical Information Systems*. Delhi: Pearson Education.
- Ian, allan (2024). *QGIS 3 For Beginners*. Kindle Edition, Amazon.
- Lillesand and R.W. Kiefer (2005). *Remote Sensing and Image Interpretation*. New York: John Wiley and Sons.
- Reddy, Anji, M. (2012). *Textbook of Remote Sensing and Geographical Information Systems*. Hyderabad: BSP B.S. Publications.
- Sharma, R.K. (2010). *Air Photos Interpretation, Remote Sensing and Geographical Information System*. Udaipur: Himanshu Publications.
- Siddiqui, M.A. (2011). *Introduction to Geographical Information Systems*. Allahabad: Sharda Pustak Bhawan.
- Simhachalam, A. (2021). *Application of Geo-Spatial Technologies in Natural Resource Management*. New Delhi: Akansha Publishing House.
- Sreekanth, P.D., Soam, S.K. and Srinivasa Rao (2020). *Practical Manual for GIS*. New Delhi: Bio-Green Books.

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INDUSTRIAL GEOGRAPHY

Paper Code: **DSE-04 (i)** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: The students will gain a better understanding of the process of industrial localization and Industrial Development. CO-02: They will be able to know the global and national scenario of specific industry development. CO-03: They will develop skill to identify and assess the industrial regions in futuristic way and evaluate the industrial policies and their impact on regional development.	Internal Assessment: Attendance 5 Assignment 5 Sessional Exam 15	25 Marks

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Industrial Geography: Nature, Scope and Relevance in Current Scenario. Classification of Industries, Factors of Industrial Location; Industrial Regions of India: Major and Minor.

UNIT-II

Theories of Industrial Location: A. Weber, E. M. Hoover, August Losch and D. M. Smith;
Major Industries: Iron and Steel, Cotton Textile, Petrochemical, Automobile and IT industry.

UNIT-III

Major Industrial Regions of World; Industrial Corridor in India; Impact of Globalization on Manufacturing Sector in Less Developed Countries; Industrial impact on Environment and Society; Industrial Policy of India.



Suggested Readings:

- Alexanderson, C. (1967). *Geography of Manufacturing*. New Delhi: Prentice-Hall of India.
- Banerjee-Guha, S. (1997). *Spatial Dimensions of International Capital: Study of Multinational Corporations in India*. New Delhi: Orient Longman.
- Chaudhuri, M. R. (1976). *Indian Industries Development and Location*. Chicago: Oxford Book House.
- Hamilton, I. (1992). *Resources and Industry*. New York: Oxford University Press.
- Hamilton, F.E.I. & Lingo, G.J.R. (1979). *Spatial Analysis, Industry and Industrial Environment*. New Jersey: John Wiley.
- Hoover, E. M. (1948): *Location and Space Economy*, McGraw Hill, New York.
- Lloyd, P. E. and Dicken, P. (1972). *Location in Space-A Theoretical Approach to Economic Geography*. New York: Harper and Row.
- Losch, A. (1954). ***The Economics of Location***. London: Yale University Press.
- Kulkarni, M.R. (2018). *Industrial Development*. New Delhi: National Book Trust.
- Lodha, R.M. (2021). *Audyogika Bhoogol* (Hindi). Jaipur: Rajasthan Hindi Granth Academy.
- Miller, E. (1962). *A Geography of Manufacturing*. New Jersey: Prentice-Hall.
- Misra. H.N. (2014). *Managing Natural Resources Focus on Land and Water*. New Delhi: Prentice Hall.
- Pacione, M. (1985). *Progress in Industrial Geography*. New York: Routledge.
- Riley, R. C. (1973). *Industrial Geography*. London: Chatto and Windus Ltd.
- Rostow, W.W. (1991). ***The Stages of Economic Growth: A Non-Communist Manifesto***. London: Cambridge University Press.
- Smith, D. M. (1982). *Industrial Location - An Economic Geographic Analysis*. New Jersey: John Wiley and Sons.
- Seth, V.K (1987). *Industrialization in India - Spatial Perspective*. Delhi: Commonwealth Publications.
- Saxena, A. N, (1985). *Planning and Promotion of Production - The Indian Experience*, Vol.-I and II. New Delhi: National Productivity Council.
- Singh, M. B. (1990). *New Perspectives in Industrial Geography*. Varanasi: Lotus Publication.
- Watts, H. D. (1980). *Large Industrial Enterprise; Some Spatial Perspectives*. New York: Routledge.



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GENDER GEOGRAPHY

Paper Code: **DSE-04 (ii)** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: Understanding about growth and evolution of gender geography. CO-02: Awareness about Demographic variables and spatial patterns of Female health and Literacy. CO-03: Acquaintance with gender gaps and empowerment of women in spatial context, gender sensitive issues and policies in India.	Internal Assessment:	25 Marks
	Attendance	5
	Assignment	5
	Mid-Sem. Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Gender Geography: Growth and Evolution, Nature and Scope, Significance and Approaches, Connotation; Men-Women Relationship: Ancient to Modern Time; Emergence of Patriarchy; Post-Modern Feminist Movement.

UNIT-II

Demographic variables – Spatial Dynamics of Age and Sex-Ratio, Gender Gaps in Infant Mortality Rates; Female Infanticide and Foeticide; Reproductive Health and Poverty; **Gender Challenges:** Gender Gap-Empowerment of Women and Education; Women Trafficking; Domestic Violence: Men against Women and Vice-Versa.

UNIT-III

Regional imbalances- Sexual Harassment and Discrimination of Women at Workplace; Heinous Crime against Women Scenario in World and India, Women's Rights and Feminist Movements in India; Critical Evaluation of Case Studies of Gender Empowerment Projects in India.



Suggested Readings:

- Banerjee, N. (1985). *Women Workers in the Unorganized Sector*. Hyderabad: Sangam Books.
- Boserup, E. (1989). *Women's Role in Economic Development*. London: Earthscan.
- Desai, N. and Krishnaraj (1987). *Women and Society in India*. New Delhi: Ajanta Publications.
- Harison, S. and Pratt, G. (1995). *Gender, Work and Space*. New York: Routledge.
- Hayford, A. (1974). *The Geography of Women: An Historical Introduction*. Antipode Vol.-6, 1-19.28.
- Lee, D. (1988). *Women in Geography-A Comprehensive Bibliography*. Florida: Boca Raton.
- Mcdowell Linda (1999). *Gender, Identity and Place*. London: Polity Press.
- Momsen Janet (2010). *Gender and Development*. New York: Routledge.
- Momsen, JH. and Townsend, J. (1987). *Geography of Gender in the Third World*. New York: Albany.
- Rege, Sharmila (2000). *Real Feminism' and Dalit Women*. EPW, Vol – XXXV No. 06, February 05, 2000.
- Rege, Sharmila (1998). *Dalit Women Talk Differently-A Critique of Difference and Towards a Dalit Feminist Standpoint Position*. Spl. Issue, EPW, Vol – XXXIII No. 44, October 31, 1998.
- Reagent, A.C.and Monk J.J. (1982). *Women and Spatial Change*. Dubuque(USA): Kendall & Hunt.
- Rege Sharmila (2006). *Writing Caste, Writing Gender: Reading Dalit Women's Testimonios*. New Delhi: Zubaan Books.
- Raju, J. et. al. (1999). *Atlas on Men and Women in India*. New Delhi: Kali for Women.
- Rege Sharmila, Devika J., Kannabiran Kalpana, John Mary E., Swaminathan Padmini and Sen Samita, (2013). *Intersections of Gender and Caste- Review of Women's Studies*. EPW Spl. Vol. XLVIII No. 18.
- Raju, Saraswati. and Bagchi, Dipika (1998). *Women and Work in South Asia: Regional Patterns and Perspectives*. New York: Routledge.
- Seager, J. and Olson (1986). *A. Women in the world – An International Atlas*. London: Pluto Press.
- Sivard, R.L (1985). *Women-A World Survey*. Washington: World Priorities.
- Sharmila Rege (2003). *More than Just Tacking Women on to the 'Macropicture: Review of Women's Studies*, EPW, Vol - XXXVIII No. 43.
- Skjelsback, I. and Smith, D. (2001). *Gender, Peace and Conflict*. London: Sage.
- Sowell, T. (1994). *Race and culture-A world View*. New York: Basic Books.
- Visvanathan, Nalini. et. al. (2011). *The Women, Gender and Development Reader*. London: Zed Books Ltd.
- Zelinsky, W., Monk, J. and Hanson, S. (1982). *Women and Geography: A Review and Prospectus*. Progress in Human Geography Journal, Vol.- 6, 357-66.



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CRIME GEOGRAPHY

Paper Code: **DSE-04 (iii)** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: They will able to understand the meaning, concept and Nature of crime Geography and Crime; identify the crime places with their Geographical knowledge. CO-02: They will able to understand the Patterns, Targets and Areas of crime in India and World. CO-03: They will able to describe the implementation of regulations and role of modern Geographical techniques (GIS) in crime control.	Internal Assessment: Attendance 5 Assignment 5 Sessional Exam 15	25 Marks

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Crime Geography: Nature, Scope, Typology of crimes: Traditional Crimes, Victimless crimes, Family-centered crimes, Environmental Crimes; Theological and Ideological Bases: Role of Value System, Ethics and Institution role in Crime.

UNIT-II

Dynamics and Spatial Dimensions of Crime: Class, Gender, Age, Disability, Race and Ethnicity based social differences and geography of crime, Crime against third gender; Theories of Crime and Space: Anomie, Cultural Transmission, Crowding; Cyber Crime; Social Media crime.

UNIT-III

Crime Target and Criminal: Sources of data and Patterns of Crime in India; Crime and Regulations: Role of International Organizations; NGO, Police, Judiciary, social panchayat, and other state institutions; Major challenges behind crime in India; GIS and Crime Control.



Suggested Readings:

- Ahmad, A. (2002). *Social Geography*. Jaipur: Rawat Books Publishers.
- Banerjee, N. (1985). *Women Workers in the Unorganized Sector*. Hyderabad: Sangam Books.
- Bhushan, P.S. (1997). *Crime, Criminals and Society*. Delhi: Manisha Publications.
- Chainey, Spencer (2021). *Understanding Crime: Analyzing the Geography of Crime*. New York: Environmental Systems Research Institute Inc.
- David, J. Evans and David, T. (Ed.). *The Geography of Crime*. New York: Routledge
- Clinard Marshall B. and Abbott, D. J. (1973). *Crime in Developing Countries: A Comparative Perspective*. New Jersey: Wiley International.
- Dear, M.J. and Flusty, S. (2000). *The Spaces of Postmodernity*. Oxford: Blackwell Publishing.
- Humphries, D. and Wallace, Don (1980). *Capital Accumulation and Urban Crime*. Social Problems, Vol. 28, No. 2, pp. 179-193.
- Herbert, D. (1982). *The Geography of Urban Crime*. London: Longman.
- Newman, O. (1973). *Defensible Space, Crime Prevention through Urban Design*. London: Architectural Press.
- Pain Rachel, Barke Michael, Fuller Duncan, et. al. (2001). *Introducing Social Geographies*. London: Arnold.
- Raju, J. et. al. (1999). *Atlas on Men and Women in India*. New Delhi: Kali for Women.
- Raju, Saraswati. and Bagchi, Dipika (1998). *Women and Work in South Asia: Regional Patterns and Perspectives*. New York: Routledge.
- Rege Sharmila (2006). *Writing Caste, Writing Gender: Reading Dalit Women's Testimonios*. New Delhi: Zubaan Books.
- Seager, J. and Olson (1986). A. *Women in the world – An International Atlas*. London: Pluto Press.
- Shaban Abdul (2010). *Mumbai Political Economy of Crime and Space*. Hyderabad: Orient Blackswan.
- Sharmila Rege (2003). *More than Just Tacking Women on to the 'Macropicture: Review of Women's Studies*, EPW, Vol - XXXVIII No. 43.
- Sivard, R.L (1985). *Women-A World Survey*. Washington: World Priorities.
- Sowell, T. (1994). *Race and culture-A world View*. New York: Basic Books.
- Vincent J. Del Casino (2009). *Social Geography- Critical Introduction to Geography*. New Jersey: Wiley Blackwell.



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NATURAL RESOURCE MANAGEMENT

Paper Code: **DSE-04 (iv)** (Optional: Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes: CO-01: The students will familiar with concept of Natural Resources and their classification. CO-02: They will study the resource models and their significance in the present time. CO-03: They will be able to study and assess the distribution and utilization of natural resources.	Internal Assessment: Attendance 5 Assignment 5 Mid-Sem. Exam 15	25 Marks

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Natural Resource: Meaning and Concept, Classification; Factors Affecting Distribution. Natural Resource Management: Concept, Scope and Significance.

UNIT-II

Models of Natural Resources: Zimmerman's Primitive and Advance Model of Natural Resource Process, Kirk's Decision Model and Brookfield System Model; Environmental Impact Assessment (EIA) and Auditing.

UNIT-III

Distribution and Utilization of Natural Resources; Future Prospects of Natural Resources, Resource Conservation and Management Methods; Indian Case Studies- Mountains, Plains and Plateau.



Suggested Readings:

- Barbier, Edward B. (2005). *Natural Resources and Economic Development*. Cambridge (UK): Cambridge University Press.
- Borton, I and R W Kates (1984). *Readings in Resource Management and Conservation*. Chicago: University of Chicago Press.
- Bruce, Mitchell (1989). *Geography and Resource Analysis*. New York: John Wiley and Son.
- Das Gupta, Biplab (1979). *The Environmental Debate*. Economic and Political Weekly, Vol. 13, No. 6/7, Annual Number (Feb., 1978).
- Francois Ramade (1984). *Ecology of Natural Resources*. New York: John Wiley and Son.
- Goel, B.K. (2022). *Resource Geography* (Hindi). New Delhi: Laxmi Publications Pvt. Ltd.
- Guha, J L and P R Chattroj (1994). *Economic Geography- A Study of Resources*. Calcutta: The World Press Pvt. Ltd.
- Gurjar, R.K. and Jat, B.C. (2010). *Resource Geography*. Jaipur: Panchsheel Prakashan.
- Martino, R L (1969). *Resource Management*. London: Mc Graw Hill Book Co.
- Negi, B S (2000). *Geography of Resources*. Meerut: Kedar Nath and Ram Nath Publisher.
- Owen, Oliver, S. (1971). *Natural Resource Conservation: A Ecological Approach*. New Delhi: McMillion.
- Pati, R.N. and Mitra, M. (2024). *Natural Resource Management*. New Delhi: Abhijeet Publications
- Raja, M (1989). *Renewable Resources, Development*. New Delhi: Concept Publishing Co. Pvt. Ltd.
- Ramesh, A. (1984). *Resource Geography*. New Delhi: Heritage Publishers.
- Saikia, Debajit and Baaruah, Pradip Kumar (2023). *Natural Resource Management*. Dibrugarh: Mahaveer Publications.
- Zimmermann, E. W. (1951). *World Resources and Industries*. New Delhi: Harper and Brothers.



PG Pool: Geography

MDC

A handwritten signature in blue ink, consisting of a stylized 'B' followed by a horizontal line and a small flourish.

MDC: (Multidisciplinary Course) from the department for pool of the Courses in the University

(These courses are to be offered to students of different discipline/Subject)

MDC: (Multidisciplinary Course)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-01	Fundamentals of Geography (Theory)		2	1	-	2	1	-	3	25	50	-	-	75

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-02	Geography of Haryana (Theory)		2	1	-	2	1	-	3	25	50	-	-	75

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-03	Geography in Everyday life (Theory and Practical)		2	-	2	2	-	1	3	15	35	5	20	75

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-04	Urban Environment Challenges (Theory and Practical)		2	-	2	2	-	1	3	15	35	5	20	75

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PG Program: (Semester-I) Geography Subject MDC-1 Paper Syllabus

(as per NEP 2020 w.e.f. session 2024-25)

(offered to the students of different discipline/Subject)

FUNDAMENTALS OF GEOGRAPHY

Paper Code: MDC-01 (Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs):	Internal Assessment:	25 Marks
CO-01: The students will be able to understand the fundamentals, Coordinates and Time zones of Geography subject.	Attendance	5
CO-02: They will understand general Geographical Processes of Landform Formation and categorization.	Assignment	5
CO-03: They will be able to understand the atmospheric Temperature, Winds and the different Phenomena, the Relief and motions of Oceanic water and their importance.	Sessional Exam	15

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Shape and origin of Earth, Rotation and Revolution of Earth; Direction: divisions, Methods of determination of North Direction; Maps and Globe; Coordinate System: Latitudes and Longitudes; Time Zones; Interior of the Earth; Rocks.

UNIT-II

Major Landforms: Mountains, Plateau, Plains, Deserts; Endogenic Process: Volcano, Earthquake, Exogenic process: River and Wind. Climate and Weather, Atmosphere: Composition and Structure.

UNIT-III

Heat zones, Atmospheric Pressure belts and Winds: Planetary, Periodic and Local. Cyclone and Anticyclone. Oceanic Temperature and Salinity; Ocean currents and Tides; Major Fishing ground of World.



Suggested Readings:

- Bunnett, R.B. (2003). *Physical Geography in Diagrams*. Singapore: Pearson Education Private Ltd.
- Dayal, P. (2019). *Bhuakriti Vigyan*. (in Hindi). New Delhi: Rajesh Publications.
- Khullar, D.R. (2021). *Bhautik Bhugol*. (in Hindi). New Delhi: Kalyani Publishers.
- Lal, D.S. (1998). *Climatology*. (in Hindi/Eng). Allahabad: Chaitnya Publishing House.
- Lake, P. (1979). *Physical Geography* (in Hindi/Eng). Cambridge: Cambridge University Press.
- Negi, B.S. (1993). *Physical Geography*. Meerut: S.J. Publication.
- Singh, Savindra (2021). *Bhuakriti Vigyan*, (in Hindi/Eng). Allahabad: Pravalika Publications.
- Tikka, R.N. (2002). *Physical Geography*. Meerut: Kedarnath Ramnath & Co.
- Wooldridge, S.W. and Morgan, R.S. (1939). *The Physical Basis of Geography- An Outline of Geomorphology*. London: Longman.



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PG Program: (Semester-II) Geography Subject MDC-2 Paper Syllabus

(as per NEP 2020 w.e.f. session 2024-25)

(offered to the students of different discipline/Subject)

GEOGRAPHY OF HARYANA

Paper Code: MDC-02 (Theory Paper)

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75
Time: 2 Hours	End Semester Exam:	50 Marks
Course Outcomes (COs): CO-01: The students shall have in-depth knowledge of the land and physical diversity of Haryana. CO-02: They will understand and analyze the climate pattern and socio-cultural diversity of Haryana in Geographical perspective. CO-03: They will be able to understand characteristics, Problems and Prospects of Agricultural, natural resources, industrial development and transport networks in Haryana.	Internal Assessment: Attendance 5 Assignment 5 Sessional Exam 15	

Note:

The question Paper will have four units.

The first unit having question no. 1 shall be compulsory and shall contain seven (7) short answer type/ MCQ questions (having two (2) marks of each question) covering the entire syllabus.

The remaining three units of question paper shall contain two essay type questions (having twelve (12) marks of each question) from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit.

UNIT-I

Haryana: Location and Extent, Origin and Administrative setup of Haryana; Physiographic divisions of Haryana; Climate: Seasons; Rainfall patterns in Haryana; Soils and Vegetation; Drainage System-Yamuna, Ghaggar, Sahibi, Indauri, Markanda and Krishnawati.

UNIT-II

Population in Haryana: Population Distribution, Growth, Density, Sex Ratio, Literacy; Population Composition of Haryana: Age-Sex, Religion; Cultural Region of Haryana, Urbanisation in Haryana: Trends and associated Problems.

UNIT-III

Agriculture in Haryana: its characteristics and impact of green revolution; Problems and Prospects of Agriculture in Haryana; Irrigation Systems in Haryana; Major crops: Wheat, Rice, Cotton, Sugarcane, Mustard; Major industries of Haryana; Transportation Network of Haryana: Roadways and Railways.



Suggested Readings:

- Deshpande, C.D (1992). *India- A Regional Interpretation*. New Delhi: Northern Book Centre.
- Hussain, Majid, (2020). *Geography of India*. McGraw Hill Education India Private Ltd.
- Kumar, Mukesh (2025). *Geography of Haryana*. (in Hindi). New Delhi: Kalyani Publishers.
- Kumar, Pawan (2026). *Geography of Haryana*. (in Hindi). New Delhi: Blue Rose Publishers Pvt. Ltd.
- Kumar, Sandeep (2021). *Haryana Ka Bhugol* (in Hindi). Varanasi: Kapila publication.
- Singh, R.L. (1971). *India: A Regional Geography*. Varanasi: National Geographical Society of India.
- Singh, Jagjeet (2013). *Haryana Digdarshan*. New Delhi: Arihant Publications Ltd.
- Singh, Jasbir (1976). *An Agricultural Geography of Haryana*. Kurukshetra: Vishal Publications.
- Singh, Mandeep and Kaur, Harvinder (2004). *Economic Development of Haryana*. Delhi: Deep and Deep Publication Pvt. Ltd.
- Thusa, J.L. (2006): *Geology of Haryana and Delhi*, Geological Society of India.



Gurugram University Gurugram, Haryana (India)
PG Program: (Semester-III) Geography Subject MDC-3 Paper Syllabus
 (as per NEP 2020 w.e.f. session 2024-25)
 (offered to the students of different discipline/Subject)
GEOGRAPHY IN EVERYDAY LIFE

Paper Code: **MDC-03 (Theory and Practical Paper)**

Credit: 03 (2+0+2) L+T+P Hrs/Week		Total Marks	75
Time: 2 Hours Theory	TE	End Semester Exam:	35 Marks
	TI	Internal Assessment (Attendance) (Sessional Exam)	15 Marks (5) (10)
Course Outcomes: CO-01: The students will be able to know about mother earth and identify the Earth's Coordinate system, their significance, location of India and its impact. CO-02: They will understand the General Physical Geography fundamentals and the Population features, climatic issues/problems present in their Surrounded Environment Day to day life. CO-03: They will learn the use of climatic/Population data diagrammatically, Navigation and Basics of Cartography in Practical way.	PE	Practical Exam:	20 Marks
	PI	Internal Assessment: (Attendance)	5 Marks

Note: Theory Exam

- Part-I:** The Question one of paper is compulsory. Question one of paper will contain short answer type of questions having one (1) mark each and total five (5) marks covering entire course.
- Part-II:** The question paper will comprise two questions from each Unit (Unit-1,2 & 3) total six question in all. Candidates are required to attempt one question from each unit having ten (10) marks each, which will be of total thirty (30) marks.

Practical Exam: as the instructions mentioned under

UNIT-I

The Earth: Movements- Rotation and Revolution; Latitudes, Longitudes and significance, Heat Zones of Earth; Major Oceans and Continents; Order of Landforms; India: Location and Extent, States and Capitals, Neighbouring Countries; Weather and Climate.

UNIT-II

Physiographic division of India; Drainage pattern of India, Climate of India; Cyclone.



UNIT-III

Soil and Natural Vegetation; Transport in India: ethics of traffics rules, major ports, airports and national highways; India: demography, Migration, and urbanisation.

Practical

Data Presentation: Bar Graphs, Line Graphs and Pie Diagrams; Major Conventional Signs; Traffic Signal Signs; Map scale; Coordinates; Classification of Maps; Identification of Physical and Cultural Features on map; Use of Google Map in navigation.

Note: Practical Exam

Practical Exam Time: 4 Hours

1. The question paper will comprise practical part only. Candidates (s) are required to prepare one comprehensive Practical Record from the practical part only.
2. File record will be of Maximum 15 Marks. (PE)
3. Viva Voce will be of Maximum 5 Marks. (PE)

Suggested Readings:

- Anand, D.M. (2006). *Fundamentals of Geography*. Delhi: Sublime Publications.
- Barry, R. G. and Chorley, R. J. (1998). *Atmosphere, Weather and Climate*. London: Routledge.
- Lake, P. (1979): *Physical Geography* (Eng./Hindi). Cambridge: Cambridge University Press.
- Bunnett, R.B. (2003). *Physical Geography in Diagrams*. Fourth GCSE edition, Singapore: Pearson Education Pvt. Ltd.
- McKinney, Kevin (2003). *Everyday Geography of World: An Entertaining Review of the Land, Climate, People & History of Our World*. New York: Black Dog & Leventhal Publisher.
- Negi, B.S.(1993). *Physical Geography*. Meerut: S.J. Publication.
- Kelton, Gabriel (2014). *Geography of Everyday Life*. London: LAP Lambert Academic Publishing.
- Lal, D.S.(1998). *Climatology*. Allahabad: Chaitnya Publishing House.
- Siddhartha, K. (2013). *Basic Physical Geography*. New Delhi: Kitab Mahal Publisher.
- Strahler, A.H. (2013). *Introducing Physical Geography*. New York: John Wiley & sons.
- Tikka, R.N.(2002). *Physical Geography*. Meerut: Kedarnath Ramnath & Co.
- Doberstein, Dan (2011). *Fundamentals of GPS Receivers: A Hardware Approach*. New York: Springer.
- Mishra, R.N. and Sharma, P.K. (2019). *Prayogic Bhoogol* (Hindi). Jaipur: Rawat Publicatoins.

Gurugram University Gurugram, Haryana (India)
PG Program: (Semester-IV) Geography Subject MDC-04 Paper Syllabus
 (as per NEP 2020 w.e.f. session 2024-25)
 (offered to the students of different discipline/Subject)

URBAN ENVIRONMENT CHALLENGES

Paper Code: **MDC-04** (Optional: Theory and Practical Paper)

Credit: 03 (2+0+2) L+T+P Hrs/Week		Total Marks	75
Time: 2 Hours Theory	TE	End Semester Exam:	35 Marks
	TI	Internal Assessment (Attendance) (Sessional Exam)	15 Marks (5) (10)
Course Outcomes: CO-01: The students will understand the Urban environment and ecology with systems of city and rural-urban interaction. CO-02: They will develop the skill to expose the latest trend and patterns of urbanization. CO-03: They will able to assess urban issues, their planning and management.	PE PI	Practical Exam: Internal Assessment: (Attendance)	20 Marks 5 Marks

Note: Theory Exam

Part-I: The Question one of paper is compulsory. Question one of paper will contain short answer type of questions having one (1) mark each and total five (5) marks covering entire course.

Part-II: The question paper will comprise two questions from each Unit (Unit-1,2 & 3) total six question in all. Candidates are required to attempt one question from each unit having ten (10) marks each, which will be of total thirty (30) marks.

Practical Exam: as the instructions mentioned under

UNIT-I

Urban Environment: Concept, Nature, Scope, Types and Dynamics; Land Use Pattern; Urban Ecology and Ecosystem; Environmentally Sensitive Areas; Urban Heritage Conservation; Concepts of Eco Cities, Healthy Cities and Sustainable Cities.

UNIT-II

Urban infrastructure: Roads, Drainage, Electricity, Telecommunication, Educational, Medical and Recreational Facilities; Urban Development and Natural Resources; Urban Water Management; Urban Forestry.



UNIT-III

Sustainable Urban Management: Issues and Strategies in Air, Water, Solid Waste, Slums, Disaster Management; Concept and Mitigation: Smog, Acid Rain, Floods, Droughts, Flash Flood; Urban Heat Island; Sustainable urbanization.

Practical Field Survey Part

Urban environmental planning and management: Urban Governance, Major Issues and Management: Air Quality, Water availability, Sanitation, Transport, Housing, Solid Waste, e-Waste; Pollution: Water, Air, Soil, Noise, Thermal, Nuclear; Urban Heat Island: Case Studies from any part of India.

Note:

- The students shall visit content & research objectives-based Field survey of the out-campus study area/place, Industry, institution situated in urban area and collect data for the comprehensive study under guidance and supervision of supervisor/teacher incharge, along with supporting accompanying staff Viz. Lab Attendant etc. There shall be a teacher in-charge on a group of 12 students. They shall be paid TA/ DA as per Govt. /university rules. Duration of the urban study-based field survey will not be exceeding 4 days in normal circumstances.
- The students are required to prepare a typed report on any topic and fields of syllabus on his /her interest area in consultation with the supervisor/teacher incharge (practical group wise). They shall collect the data by Observation, Interview and Questionnaire methods, Lab Testing, Secondary Sources etc.
- In survey report writing the components will be as follows: Introduction, Problem Statement, Aim and Objectives, Study Area with Key Map, Data Collection and Methodology, Results (with graphs, diagrams, maps & images) and Analysis, Conclusion and Suggestions, Annexure and References (APA style) etc.
- The students shall submit two typed, duly signed copies of Survey Report (should not exceed 8,000 words) in Article/Research Paper format in the department. Page Size A-4, 1.5 Spacing between lines, Font- Times New Roman, Font Size 12 main body typing.

Note: Practical Exam

Practical Exam Time: 4 Hours

1. The question paper will comprise practical part only. Candidates (s) are required to prepare one comprehensive Practical Record from the practical part only.
2. File record will be of Maximum 15 Marks. (PE)
3. Viva Voce will be of Maximum 5 Marks. (PE)



Suggested Readings:

- Ahuja, Ram (2003). *Social Survey and Research* (Hindi). Jaipur: Rawat Publications.
- Allan, S., et. al.(2000). *Environmental Risks and the Media*. London: Routledge.
- Bansal, S.C. (2017). *Urban Geography*. Meerut: Meenakshi Prakashan.
- Bhattacharya, B. (1979). *Urban Development in India*. New Delhi: Shree Publishing House.
- Creswell J. (2018). *Research Design: Qualitative and Quantitative Approaches*. New Delhi: Sage Publications
- Dodman, D., McGranahan, G. and Dalal-Clayton, B. (2013). *Integrating the Environment in Urban Planning and Management: key principles and applications in the 21st century*. UNEP, Nairobi.
- Gupta, S.P. (2021). *Statistical Methods*. New Delhi: Sultan Chand and Sons.
- Hall P. (1992). *Urban and Regional Planning*. London: Routledge.
- Hanaki, K. (2008). *Urban Environmental Management and Technology*. Tokyo: Springer.
- Josef, L. (1999). *Sustaining Cities: Environmental Planning and Management in Urban Design*. New York: McGraw Hill.
- Siddharth, K. and Mukherji S. (2019). *Cities, Urbanizations and Urban Systems*. New Delhi: Kitab Mahal.
- Singh. K. and Steinberg. F. (1998). *Urban India in Crisis*. Delhi: New Age International.
- Stoddard, R. H. (1982). *Field Techniques and Research Methods in Geography*. Kendall/Hunt.
- Subhash Anand (2010). *Solid Waste Management*. New Delhi: Mittal Publication.
- Verma, L.N. (2008). *Urban Geography*. Jaipur: Rawat Publications.
- Van Bueren, E.M., Van Bohemen, H., Itard, L. and Visscher, H. (Ed) (2012). *Sustainable Urban Environments: An Ecosystems Approach*. New York: Springer.
- Yadav, Vinita. (2011). *Urban Poverty: Issues and Remedies for Inclusive Development*. Spatio-Economic Development Record. 18. 96-100.



PG Pool: Geography

SEC

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SEC: (Skill Enhancement Course) from the department for pool of the Courses in the University

(These courses are offered by each department for students of other departments/same department and is designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work.)

SEC: (Skill Enhancement Course)

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
SEC-01	Reading and Interpretation of Maps (Theory and Practical)		1	-	2	1	-	1	2	5	20	5	20	50

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
SEC-02	Computer aided Geographical graphs and diagrams (Practical)		-	-	4	-	-	2	2	-	-	15	35	50



Gurugram University Gurugram, Haryana (India)
PG Program: (Semester-II) Geography Subject SEC-1 Paper Syllabus
 (as per NEP 2020 w.e.f. session 2024-25)
READING AND INTERPRETATION OF MAPS
 Paper Code: SEC-01 (Theory and Practical Paper)

Credit: 02 (1+0+2) L+T+P Hrs/Week		Total Marks	50
Time: 2 Hours Theory	TE	End Semester Exam:	20 Marks
	TI	Internal Assessment: (Attendance)	5 Marks
Course Outcomes (COs): CO-01: The students will able to understand the Maps, its types, map elements, coordinates, Map symbols, along with key features of Weather Maps and Topographical sheets. CO-02: The students will able to learn essential observational and practical skills to identify different features on various types of maps and their appropriate interpretation.	PE	Practical Exam:	20 Marks
	PI	Internal Assessment: (Attendance)	5 Marks

Note: Theory Exam

1. The Question no. one (1) of question paper is compulsory and it will contain six (6) short answer type/MCQ questions from unit-1 and 2, having one mark each and total six (6) marks.
2. The question paper will comprise two long answer type questions from each Unit (Unit-1, 2) total four question in all. Candidates are required to attempt total two questions, one question from each unit, having seven (7) marks each, which will be of total fourteen (14) marks.

Practical Exam: as the instructions mentioned under

UNIT-I

Cartography: Concept, Historical development and significance; Maps: Concept, classification of maps; Map and Sketch; Elements of Map; Map and Globe; Map Scale: Types and conversion; Directions: Division and Sub-Division, Methods of determination of North Direction; Latitudes and Longitudes
 World Time Zones.

UNIT-II

Conventional signs and Weather symbols; Isopleths: Types and significance; Topographical Map/Sheet: Scales and series in India; Key components for the Interpretation of Topographical Map; Weather Maps and Key components for the Interpretation of Weather Maps.



Practical

1. Reading and Interpretation of Physical Map/Toposheet: Physical feature analysis.
2. Reading and Interpretation of Political Map/Toposheet: Cultural feature analysis.
3. Reading and Interpretation of Weather Map.

Note: Practical Exam

Practical Exam Time: 4 Hours

1. The question paper will comprise practical part. The Candidates (s) are required to prepare one report on each topic from the practical part. These reports will be of five (5) marks each.
2. The Candidates will be required to prepare report precisely on the specified Analysis of different Maps.
3. Map reports will be of Maximum 15 Marks. (PE)
4. Viva Voce will be of Maximum 5 Marks. (PE)

Suggested Readings:

- Maling, H. (1973). *Co-Ordinate System and Map Projections*. London: George Philip.
- Mishra, R.N. and Sharma, P.K. (2020). *Prayogik Bhugol*. (in Hindi). Jaipur: Rawat Publications.
- Misra, R.P. and Ramesh, A. (1989). *Fundamental of Cartography*. New Delhi: Concept Publishing Company.
- Richardus, P. and Adler Ron K. (1972). *Map Projections*. Amsterdam: North Holland Publishing Co.
- Robinson, A.H. et. Al. (1992). *Elements of Cartography*. New York: John Willy & Sons. 6th edition.
- Sarkar, A. (2015). *Practical Geography: A Systematic Approach*. New Delhi: Orient Black Swan Private Ltd.
- Sharma, J.P. (2020). *Prayogik Bhugol*. (in Hindi). Meerut: Rastogi Publications.
- Singh, R. L. and P. K. Dutta. (2012). *Prayogatmak Bhugol*. (in Hindi). Allahabad: Central Book Depot.
- Singh, R.L. and Rana P.B. Singh. (2020). *Elements of Practical Geography*. Ludhiana: Kalyani Publishers.



Gurugram University Gurugram, Haryana (India)

PG Program: (Semester-III) **Geography** Subject SEC-02 Paper Syllabus
(as per NEP 2020 w.e.f. session 2024-25)

COMPUTER AIDED GEOGRAPHICAL GRAPHS AND DIAGRAMS

Paper Code: **SEC-02** (Practical Paper)

Credit: 02 (0+0+4) L+T+P Hrs/Week		Total Marks	50
Time: 4 Hours	PE	End Semester Practical Exam:	35 Marks
Course Outcomes: CO-01: The students will be able to understand the applicability of computer in Geographical study and develop the ability to prepare, classify and organise data on computer. CO-02: They will better understand the different types of data, visualize and analyse the statistical graphs and diagram properly through computer.	PI	Internal Assessment: Attendance: Practical Assignment:	15 Marks 5 10

Note:

The question paper would be set from the syllabus covering the full content. The question paper for the written examination (4 hours duration) shall be made by the external examiner in assistance with the internal examiner. The answer books would be evaluated by the external examiner on the day of examination. The question paper in this course will be divided into two parts.

Part-I will consist of Five (4) short answer type questions carrying one (1) mark each.

Part-II will consist of eight (8) Choice based descriptive questions/exercises from the entire syllabus and carrying Four (4) marks each. Students will have to answer any four questions/exercises.

- Computer in Geography: Meaning and significance;
- Components of Computer: Hardware and Software, System software and application software,
- Input and Output devices;
- Microsoft office and Functioning of its Components;
- Statistical Diagrams through Computer in Geography;
- Geographical Research and Computer.
- Microsoft Excel: Spreadsheet- Row and Column, Cell Address;
- Data handling in Excel: Input, Organization and Tabulation, Ascending and Descending Arrangement, Auto Completion;
- Basic Functions and use of Basic Formulas in Ms Excel;



- Climatic and Population data presentation: Bar Graphs, Line Graphs, Pie Diagrams, Area and Scatter Diagrams in 2-D and 3-D;
- Placement and Editing of Heading: Sub-Heading, Legend; Font Style, Size and Colour Change;
- Porting of Graphs and Diagrams in Microsoft Word, Paint or any other Software;
- Printing of Graphs and Diagrams.

Distribution of Marks: In Practical Paper, the marks would be divided as follows:

		Type	Marks and no. of questions	Marks	Marks	Total Marks
(a).	Written Examination	Part-I	1 Marks 4 questions	4	20	35
		Part-II	4 marks 4 questions	16		
		Viva-Voce				
	File Record				10	
(b).	Internal Assessment	Practical Assignment			10	15
		Attendance			5	
Total Marks =						50

Suggested Readings:

- Abbott, Martin Lee (2014). *Understanding Educational Statistics using Microsoft Excel and SPSS*. New Jersey: John Wiley & Sons.
- Gupta, S.P. (2021). *Statistical Methods*. New Delhi: Sultan Chand and Sons.
- Jain, Riyanka (2018). *Statistical Analysis in Microsoft Excel*. New Delhi: Universal Academic Books Publishers & distributors.
- Jelen, B. (2010). *Charts and Graphs: Microsoft Excel 2010*. Boston: Que Publishing.
- Lalwani, L. (2019). *Excel 2019 All-in-one: Master the new features of Excel 2019/ office 365*. New Delhi: BPB Publications.
- Mahmood, A. (1993). *Statistical Methods in Geographical Studies*. New Delhi: Rajesh Publications.
- Monkhouse, F.J. and Wilkinson, H.R. (1971). *Maps and Diagrams*. London: Methuen.
- Mishra, R.N. and Sharma, P.K. (2020). *Prayogik Bhoogol, (Hindi)*. Jaipur: Rawat Publications.
- Singh, M. Et. al. (2021). *Excel in Geography*. Durban: Tess Publishing.
- Sharma, J. P. (2020). *Prayogtmak Bhugol ki Rooprekha (Hindi)*, Meerut: Rastogi Publications.

PG Pool: Geography

VAC

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VAC: (Value Added Course) from the department for pool of the Courses in the University

(All the departments will offer value added course for the students of same or different departments.)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-01	Water conservation Techniques: Geographical Perspective (Theory and Practical)		1	-	2	1	-	1	2	5	20	5	20	50

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-02	Green, Energy and Water Crediting Techniques: Geographical Perspectives (Theory and Practical)		1	-	2	1	-	1	2	5	20	5	20	50



Gurugram University Gurugram, Haryana (India)

PG Program: (Semester-I) Geography Subject VAC Paper Syllabus
(as per NEP 2020 w.e.f. session 2024-25)

WATER CONSERVATION TECHNIQUES: GEOGRAPHICAL PERSPECTIVE

Paper Code: VAC-01 (Theory and Practical Paper)

Credit: 02 (1+0+2) L+T+P Hrs/Week		Total Marks	50
Time: 2 Hours Theory	TE	End Semester Exam:	20 Marks
	TI	Internal Assessment: (Attendance)	5 Marks
Course Outcomes (COs): CO-01: The students will be able to understand the fundamentals, issues and mitigation strategies of water conservation via traditional and modern techniques of water resource management. CO-02: The students will be able to develop the skill to analyze the concepts, issues and challenges of different techniques used for water conservation in any area with practical field study.	PE PI	Practical Exam: Internal Assessment: (Attendance)	20 Marks 5 Marks

Note: Theory Exam

1. The Question no. one (1) of question paper is compulsory and it will contain six (6) short answer type/MCQ questions from unit-1 and 2, having one mark each and total six (6) marks.
2. The question paper will comprise two long answer type questions from each Unit (Unit-1, 2) total four question in all. Candidates are required to attempt total two questions, one question from each unit, having seven (7) marks each, which will be of total fourteen (14) marks.

Practical Exam: as the instructions mentioned under

UNIT-I

- Nature, Scope, Fundamentals and Key concepts of Geography of water resources;
- Classification of water resources on Earth; Water uses in different sectors;
- Water Crises global and India specific; Water Resources Problems and solutions;

UNIT-II

- Methods and Techniques of Water Conservation: Traditional (Pond, Lake, Nada/Nadi, Bawari/Baori, Taanka/Kundi, Jhalra, Khadin, Toba, Kui, Ahar Pynes, Johad, Kund, Baoli, Bhandara Phad etc.) and Modern (Check Dams, Watershed management, drip irrigation, Rainwater harvesting, Canal, Water reuse and water treatment etc.); Degradation of traditional water conservation techniques;
- Role of Remote Sensing and GIS in water conservation; National water policy of India.

Practical

Field survey work-based report on the status of Water conservation techniques of any area.

Note: Practical Exam

Practical Exam Time: 4 Hours

1. The question paper will comprise questions from practical part only. The Candidates (s) are required to prepare a comprehensive report based on Field work.
2. Candidates will be required to prepare report precisely on the specified Analysis of field survey.
3. This Field Survey report will be of Maximum 15 Marks. (PE)
4. Viva Voce will be of Maximum 5 Marks. (PE)

Distribution of Marks: In Practical Paper, the marks would be divided as follows:

		Type	Marks and no. of questions		Marks	Marks	Total Marks
(a).	Theory Examination	Part-I	1 Marks 5 questions	TE	5	20	25
		Part-II	5 marks 3 questions		15		
		Internal (Attendance)		TI		5	
(b).	Practical Examination	Field Survey report		PE	15	20	25
		Viva Voce			5		
		Internal (Attendance)		PI		5	
	Total Marks =						50

Suggested Readings:

- Andrew, A. Dzurik (2002). *Water Resources Planning*. Rowman & Littlefield Publishers.
- Brooks, K.N., Falliott. P.F. and Magner, J.A. (2012). *Hydrology and the Management of Watershed*. Wiley Blackwell.
- Cech, T.V. (2009). *Principles of Water Resources: History, Development, Management and Policy*. New Jersey: John Wiley and Sons.
- Gulhati, N.D. (1972). *Development of Interstate Rivers: Law and Practice in India*. Bombay: Allied Publishers.
- Gurjar, R.K. and Jat, B.C. (2013). *Water Resource Geography* (in Hindi). Jaipur: Rawat Publications.
- Husain Majid (1994). *Resource Geography*. New Delhi: Anmol Publication Pvt. Ltd.
- Krutilla, John, V. and Eckstein, O. (1958). *Multiple Purpose River Development*. John Hopkins Press.
- Mattern, J.R. (1984). *Water Resources Distribution, Use and Management*. Maryland: John Wiley.
- Mishra, S.P. (2007). *Jal Sansadhan: Prabhandhan evm Sanrakshan* (in Hindi). Jaipur: Avishkar Publishers.
- Murthy J.V.S. (1994). *Watershed Management in India*. New Delhi: Wiley Eastern Ltd.
- Neil S. Grigg (1996). *Water Resources Management*. New York: McGraw Hill Book Co.

- Newson M (1992). *Land, Water and Development: River Basin System and Their Sustainable Management*. London: Routledge.
- Pinder G.F. and Celia M.A. (2006). *Subsurface Hydrology*. New Jersey: Wiley, Hoboken,
- Rao. K.L. (1979). *India's water Wealth*. New Delhi: Orient Longman.
- Singh R.A. and Singh S.R. (1979). *Water Management: Principles and Practices*. Varanasi: Tara Publication.
- Todd, D.K., Larry, W.M. (2004). *Groundwater Hydrology*. John Wiley & Sons.



Gurugram University, Gurugram, Haryana (India)
M.A. Geography (Semester-III) Syllabus (as per NEP 2020 w.e.f session 2024-25)

**GREEN, ENERGY AND WATER CREDITING TECHNIQUES:
GEOGRAPHICAL PERSPECTIVE**

Paper Code: VAC-02 (Theory and Practical Paper)

Credit: 02 (1+0+2) L+T+P Hrs/Week		Total Marks	50
Time: 2 Hours Theory	TE	End Semester Exam:	20 Marks
	TI	Internal Assessment: (Attendance)	5 Marks
Course Outcomes: CO-1: It will create a better understanding the green practice learning, the Water issues its conservation for long-term Development and Growth, the impact assessment and mitigation of Energy resources on environment. CO-2: The course focuses on enhancing the potential of students to visualize the Green, Water and Energy crediting and auditing reality through empirical field survey-based study.	PE	Practical Exam:	20 Marks
	PI	Internal Assessment: (Attendance)	5 Marks

Note: Theory Exam

1. The Question no. one (1) of question paper is compulsory and it will contain six (6) short answer type/MCQ questions from unit-1 and 2, having one mark each and total six (6) marks.
2. The question paper will comprise two long answer type questions from each Unit (Unit-1, 2) total four question in all. Candidates are required to attempt total two questions, one question from each unit, having seven (7) marks each, which will be of total fourteen (14) marks.

Practical Exam: as the instructions mentioned under

UNIT-I

Green, Water and Energy Crediting and Auditing: Concept, Process, Criterion, Relevance and Significance in Geographical Study, Audit Preparation: - General Steps; Water: - Sources, Quality and pollution;

UNIT-II

Rain water Harvesting; Renewable and Non-Renewable Energy Resources; Carbon Footprint; Recent Trends of Green, Water and Energy Management laws and Awareness Program.



Practical

Preparation of Auditing Survey Report: Green Audit/ Water Audit/ Energy Audit and survey Report writing (Any One).

Note:

- The students shall visit content & research objectives based Field survey of the out campus study area/place, Industry, institution and collect data for the comprehensive Green/Water/Energy study under guidance and supervision of supervisor/teacher incharge, along with supporting accompanying staff Viz. Lab Attendant etc. There shall be a teacher in-charge on a group of 12 students along with mandatory lady teacher-in charge, if there are girls students. They shall be paid TA/ DA as per Govt. /university rules. Duration of the Green/Water/Energy based field survey study will not be exceeding 5 days in normal circumstances.
- The students are required to prepare a typed report on any topic and fields of syllabus on his /her interest area in consultation with the supervisor/teacher incharge (practical group wise). They shall collect the data by Observation, Interview and Questionnaire methods, Lab Testing, Secondary Sources etc.
- In audit survey report writing the components will be as follows: Introduction, Problem Statement, Aim and Objectives, Study Area with Key Map, Data Collection and Methodology, Results (with graphs, diagrams, maps & images) and Analysis, Conclusion and Suggestions, Annexure and References (APA style) etc.
- The students shall submit two typed, duly signed copies of Survey Report (should not exceed 8,000 words) in Article/Research Paper format in the department. Page Size A-4, 1.5 Spacing between lines, Font- Times New Roman, Font Size 12 main body typing.

Note: Practical Exam:

Practical Exam Time: 4 Hours

1. The question paper will comprise practical part only. Candidates (s) are required to prepare audit report on any of one topic i.e. Green Audit/ Water Audit/ Energy Audit. The audit Report will be of 15 marks. Candidates will be required to prepare Audit Report Precisely on the specified analysis of Green Practice (on any out-campus area of their interest or any institution).
2. This Field work Survey report will be of total 15 marks. (PE)
3. Viva-Voce on this Field Survey report will be of Maximum 5 Marks. (PE)



Distribution of Marks: In Practical Paper, the marks would be divided as follows:

		Type	Marks and no. of questions		Marks	Marks	Total Marks
(a).	Theory Examination	Part-I	1 Marks 6 questions	TE	6	20	25
		Part-II	7 marks 2 questions		14		
		Internal (Attendance)			TI		5
(b).	Practical Examination	Field Survey report		PE	15	20	25
		Viva Voce			5		
		Internal (Attendance)		PI		5	
	Total Marks =						50

Suggested Readings:

- Ahuja, Ram (2003). *Social Survey and Research* (Hindi). Jaipur: Rawat Publications.
- Allan, S., et. al. (2000). *Environmental Risks and the Media*. London: Routledge.
- *Green Audit/Energy Audit/Environment Audit report* (2021-22), Uttarakhand open University, Behind Transport Nagar, University Road Haldwani, Nainital Uttarakhand
- *Green Audit Audit report* (2022-23), Miranda House, University of Delhi.
- *Green & Environmental Audit Report* (2020-21), Vidyasagar University, Midnapore, West Bengal.
- Gupta, S.P. (2021). *Statistical Methods*. New Delhi: Sultan Chand and Sons.
- Pathak, Hemant (2015). *A Hand Book of Environmental Audit*. Amazon Kindle Edition.
- Singh, M. Et. al. (2021). *Excel in Geography*. Durban: Tess Publishing.
- S., Langi, B., Gurav, M. (2019). *Green Audit in Academic Institutes*. International Journal of Multidisciplinary Educational Research, Vol. 8, Issue 6, pp. 97-107.
- Shrivastava, A.K. (2003). *Environment Auditing*. Delhi: APH Publishing Corporation.
- Stoddard, R. H. (1982). *Field Techniques and Research Methods in Geography*. Kendall/Hunt.
- Wolcott, H. (1995). *The Art of Fieldwork*. California: Alta Mira Press.

Gurugram University, Gurugram, Haryana (India)
M.A. Geography (Semester-III) Syllabus (as per NEP 2020 w.e.f session 2024-25)

SEMINAR

Paper Code: Seminar (Practical only)

Credit: 02 (0+0+4) L+T+P Hrs/Week		Total Marks	50
Time: 4 Hours	PE	End Semester Evaluation and Practical Exam:	35 Marks
Course Outcomes: CO-01: The course is to impart practical training to students on the any topic of their interest on the sub-field of Geography through use of ICT. CO-02: The course is helpful to know the methods of collecting and analyzing data as well as presenting in the form of seminar PowerPoint (ppt) presentation.	PI	Internal Assessment: Attendance Assignment	15 Marks (5) (10)

Note:

- (a) The students shall be assessed on the basis of PowerPoint (PPT) Preparation, and
- (b) Interactive Discussion on PPT Presentation in presence of Examiner, Supervisor/Teacher In charge, senior faculty/ Head of Department.

Guidelines

Seminar: A course or a component of a course which makes students to learn a specific topic through in-depth exploration and analysis of facts about the topic in a set-up that involves presentation, interactive discussions and collaborative learning under the supervision of a teacher.

1. The students are required to prepare a typed report in form of Article/Research Paper on topics and fields of syllabus or any research on his /her interest area in consultation with the supervisor/teacher incharge and it will be presented through PowerPoint presentation (PPT) in the seminar.
2. The students shall submit two, typed, duly signed copies of Report (should not exceed 8,000 words) in Article/Research Paper format in the department.
3. Page Size A-4, 1.5 Spacing between lines, Font- Times New Roman, Font Size 12 main body typing.



		Evaluation Type		Marks	Total Marks
(a).	PE (Marks)	Preparation of Report/Research paper and PPT (File Record)		20	35
		Power Point (PPT) Presentation in presence of the external & Internal examiner, Supervisor, senior faculty/Head of Department		10	
		Viva-Voce (interactive discussion with External Examiner)		5	
(b).	PI (Marks)	Internal Assessment	Assignment	10	15
			Attendance (Marks)	5	
	Total Marks =				50

Recommended Readings:

- Ahuja, Ram (2003). *Social Survey and Research* (Hindi). Jaipur: Rawat Publications.
- Basotia, G. R. and Sharma, K. K. (2002). *Research Methodology*. Jaipur: Mangal Deep Publications.
- Creswell J. (2018). *Research Design: Qualitative and Quantitative Approaches*. New Delhi: Sage Publications..
- Gupta, S.P. (2021). *Statistical Methods*. New Delhi: Sultan Chand and Sons.
- Harvey, David (1969). *Explanation in Geography*. London: Edward Arnold.
- Limb, M. (2001). *Qualitative Methodologies for Geographers. Issue and Debates*. London: Edward Arnold.
- Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.
- Kumar, Ranjit (2005). *Research Methodology: Step by Step Guide for Beginners*. Pearson, Australia.
- Limb, Melanie and Claire Dwyer (2001). *Qualitative Methodologies for Geographers*. London: Arnold.
- Mahmood, A. (2020). *Statistical Methods in Geographical Studies*. New Delhi: Rajesh Publications.
- Misra, H.N. and Singh, Vijai P. (2002). *Research Methodology in Geography: Social, Spatial and Policy Dimensions*. Jaipur: Rawat Publications.
- Misra, R.P. (2015). *Research Methodology: A handbook*. New Delhi: Concept Publishing Company.
- Paul Oliver (2004). *Writing your Thesis*. New Delhi: Vistar Publication.
- Robinson, Guy M. (1998). *Methods and Techniques in Human Geography*. New York: John Wiley.
- Singh, M. Et. al. (2021). *Excel in Geography*. Durban: Tess Publishing.

Gurugram University, Gurugram, Haryana (India)
M.A. Geography (Semester-IV) Syllabus (as per NEP 2020 w.e.f. session 2024-25)

FIELD WORK AND REPORT WRITING

Under the Community Engagement/Field Work/Survey/Seminar of NEP 2020

(Field Survey/Dissertation: Practical only)

Paper Code: Field Work/Survey

Credit: 06 (0+0+12) L+T+P Hrs/Week		Total Marks	150
Time: 4 Hours	PE	End Semester Evaluation and Practical Exam:	100 Marks
Course Outcomes: CO-01: The course is to impart practical training to students on the field survey study. CO-02: The course aims at developing the skill of observing Physical, Socio-Economic and Environmental Phenomenon in the field survey. CO-03: The course is helpful to know the methods of collecting and analyzing data as well as presenting in the form of a field survey report/dissertation. CO-04: The course focuses on enhancing the potential of students to visualize the geographical reality through Empirical field-based study.	PI	Internal Assessment: Attendance Field Work Assignment	50 Marks (5) (45)

Note:

- (a) Supervised field visit survey research report/dissertation will be evaluated by the external examiner.
- (b) The students shall be assessed on the basis of PowerPoint (PPT) Presentation in presence of external examiner, Supervisor, senior faculty/Head of Department etc.

Guidelines

1. At the Commencement of fourth Semester students are required to conduct a field survey on any Physical-Mountains, Glaciers, Plains, Plateau, Deserts and Coastal; Social, Cultural, Economical, Industrial, Environmental study of his /her interest area in consultation with the supervisor/teacher incharge to conduct FIELD VISIT SURVEY.
2. The students shall visit content & research objectives based out-campus Field survey of the study area/place and collect data for the comprehensive Geographical study under guidance and supervision of supervisor, along with supporting accompanying staff Viz. Lab Attendant etc.
3. There shall be a teacher in-charge on a group of 12 students along with mandatory lady teacher-in charge, if there are girls students. They shall be paid TA/ DA as per Govt. /university rules. Duration of the field survey study will not be exceeding 10 days in normal circumstances.
4. The data collection may be through Observation, Interview and Questionnaire methods; Lab Testing etc. In the report writing the components will be as follows: Introduction, Statement of the Problem, aims and objectives, Significance of study, Study Area with Key Map, Literature Review, Data

Collection and Methodology, Results (with graphs, diagrams, maps & images) and Analysis, Conclusion and Suggestions, Annexure and References/Bibliography (APA style) etc.

5. Submission: The students shall submit three typed copies (after the Plagiarism checking) of Supervised Field Survey Report (15,000 to 25,000 words) in dissertation format in the department after the signing of concerned supervisor and authorities.
6. Page size A-4, 1.5 spacing between lines, font- Times New Roman, font size 12 main body typing.

		Evaluation Type		Marks	Total Marks
(a).	PE (Marks)	Field Survey Report/dissertation (File Record)		40	100
		Power Point (PPT) Presentation in presence of the external & Internal examiner, Supervisor, senior faculty/Head of Department		40	
		Viva-Voce (interactive discussion with External Examiner)		20	
(b).	PI (Marks)	Internal Assessment	Field Work Assignment	45	50
			Attendance (Marks)	5	
	Total Marks =				150

Recommended Readings:

- Ahuja, Ram (2003). *Social Survey and Research* (Hindi). Jaipur: Rawat Publications.
- Basotia, G. R. and Sharma, K. K. (2002). *Research Methodology*. Jaipur: Mangal Deep Publications.
- Creswell J. (2018). *Research Design: Qualitative and Quantitative Approaches*. New Delhi: Sage Publications.
- Eyles, John and David M. Smith (1988). *Qualitative Methods in Human Geography*. Oxford: Polity Press.
- Flowerdew, R. and Martin, D. (1997). *Methods in Human Geography. A Guide for Students Doing a Research Project*. New Jersey: Prentice Hall.
- Gideon Sjoberg and Roger Nett (1992). *A Methodology for Social Research*. Jaipur: Rawat Publications.
- Gupta, S.P. (2021). *Statistical Methods*. New Delhi: Sultan Chand and Sons.
- Harvey, David (1969). *Explanation in Geography*. London: Edward Arnold.
- Limb, M. (2001). *Qualitative Methodologies for pGeographers. Issue and Debates*. London: Edward Arnold.
- Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.
- Kumar, Ranjit (2005). *Research Methodology: Step by Step Guide for Beginners*. Pearson, Australia.
- Mahmood, A. (2020). *Statistical Methods in Geographical Studies*. New Delhi: Rajesh Publications.
- Misra, H.N. and Singh, Vijai P. (2002). *Research Methodology in Geography: Social, Spatial and Policy Dimensions*. Jaipur: Rawat Publications.
- Misra, R.P. (2015). *Research Methodology: A handbook*. New Delhi: Concept Publishing Company.
- Paul Oliver (2004). *Writing your Thesis*. New Delhi: Vistar Publication.
- Robinson, Guy M. (1998). *Methods and Techniques in Human Geography*. New York: John Wiley.
- Singh, M. Et. al. (2021). *Excel in Geography*. Durban: Tess Publishing.
- Somekh, Bridget and Cathy Lewin (2005). *Research Methods in the Social Sciences*. New Delhi: Vistar Publications.
- Stoddard, R. H. (1982). *Field Techniques and Research Methods in Geography*. Kendall/Hunt.
- Wolcott, H. (1995). *The Art of Fieldwork*. California: Alta Mira Press.