

DEPARTMENT OF GEOGRAPHY

B.P.S.M.V. Khanpur Kalan

Course Structure for M. Sc. Geography (CBCS) w.e.f. July 2024

Semester I

Sr. No	Course Code	Exam Course Code	Nomenclature of the Course	Contact Hours			Credits	Max. Marks		
				L	T	P		Th	IA	Total
1	16GEOG101CC	1061	Climatology	3	1	0	4	80	20	100
2	16GEOG102CC	1062	Geography of India	3	1	0	4	80	20	100
3	16GEOG103CC	1063	Economic Geography	3	1	0	4	80	20	100
4	16GEOG104CC	1064	Statistical Methods in Geography	3	1	0	4	80	20	100
5	16GEOG105CC	1065	Cartographic Methods in Geography (Theory)	2	0	0	2	40	10	50
6	16GEOG106CC	1066	Practical Geography: Cartographic Methods in Geography	0	0	8	4	Practical Total Marks : 100 Distribution of Marks: Lab Work Test: 60 Record on Lab Work: 20 Viva-Voce: 20		
			Total Credits:				22			550

Note:

L – Lecture
Th – Theory;

P – Practical;
IA – Internal Assessment

T – Tutorial

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Course Structure for M. Sc. Geography (CBCS) w.e.f. July 2024

Semester - II

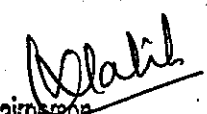
Sr. No	Course Code	Exam Course Code	Nomenclature of the Course	Contact Hours			Credits	Max. Marks		
				L	T	P		Th	IA	Total
1	16GEOG201CC	2061	Geomorphology	3	1	0	4	80	20	100
2	16GEOG202CC	2062	Population Geography	3	1	0	4	80	20	100
3	16GEOG203CC	2063	Oceanography	3	1	0	4	80	20	100
4	16GEOG204CC	2064	Agricultural Geography	3	1	0	4	80	20	100
5	16GEOG205CC	2065	Morphometric and Hypsometric Analysis (Theory)	2	0	0	2	40	10	50
6	16GEOG206CC	2066	Practical Geography: Morphometric and Hypsometric Analysis	0	0	8	4	Practical Total Marks: 100 Distribution of Marks: Lab Work Test: 60 Record on Lab Work: 20 Viva-Voce: 20		
			Total Credits:				22			550

Note:

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Course Structure for M. Sc. Geography (CBCS) w.e.f. July 2024

Semester III

Sr. No	Course Code	Exam Course Code	Nomenclature of the Course	Contact Hours			Credits	Max. Marks		
				L	T	P		Th	IA	Total
1	16GEOG-301CC	3061	Regional Planning and Development	3	1	0	4	80	20	100
2	16GEOG-302CC	3062	Introduction to Remote Sensing and Research-Methodology (Theory)	3	1	0	4	80	20	100
Select one course from Below mentioned courses:										
3	16GEOG303DCEC (i)	3063	Fluvial Geomorphology	3	1	0	4	80	20	100
4	16GEOG303 DCEC (ii)	3064	Urban Geography	3	1	0	4	80	20	100
5	16GEOG303 DCEC (iii)	3065	Resource Geography	3	1	0	4	80	20	100
6	16GEOG303DCEC (iv)	3066	Rural Settlement Geography	3	1	0	4	80	20	100
Select one course from Below mentioned courses:										
7	16GEOG304 DCEC (i)	3067	Geography and Disaster Management	3	1	0	4	80	20	100
8	16GEOG304 DCEC (ii)	3068	Soil Geography	3	1	0	4	80	20	100
9	16GEOG304 DCEC (iii)	3069	Political Geography	3	1	0	4	80	20	100
10	16GEOG304 DCEC (iv)	3070	Bio Geography	3	1	0	4	80	20	100
Compulsory Courses:										
11	16GEOG-305CC	3071	Practical of Remote Sensing Techniques and Report writing of socio-economic data	0	0	8	4	Practical Total Marks: 100		100
12	16GEOG306 CC	3072	Environmental Geography	3	1	0	4	80	20	100
13.	Open Elective Course (OEC)*		Open Elective Course (OEC)	3	1	0	4	80	20	100
			Total Credits:				28			700

Note: *The student of M. Sc Geography shall fill one open elective course from common pool.

❖ **Fundamentals of Geography:** Open Elective Courses as offered by the Department of Geography for the students of the other Department.

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DEPARTMENT OF GEOGRAPHY

B.P.S.M.V. Khanpur Kalan

Course Structure for M. Sc. Geography (CBCS) w.e.f. July 2024

Semester IV

Sr. No	Course Code	Exam Course Code	Nomenclature of the Course	Contact Hours			Credits	Max. Marks		
				L	T	P		Th	IA	Total
1	16GEOG401CC	4061	Geographical Thought	3	1	0	4	80	20	100
2	16GEOG402CC	4062	Fundamentals of Geographical Information System (Theory)	2	0	0	2	40	10	50
Select one course from Below mentioned courses:										
3	16GEOG403 DCEC (i)	4063	Geography of Tourism	3	1	0	4	80	20	100
4	16GEOG403 DCEC (ii)	4064	Tropical Climatology	3	1	0	4	80	20	100
5	16GEOG403 DCEC (iii)	4065	Geography of Health and Well-being	3	1	0	4	80	20	100
6	16GEOG403 DCEC (iv)	4066	Cultural Geography	3	1	0	4	80	20	100
Select one course from Below mentioned courses:										
7	16GEOG404 DCEC (i)	4067	Social Geography	3	1	0	4	80	20	100
8	16GEOG404 DCEC (ii)	4068	Gender Geography	3	1	0	4	80	20	100
9	16GEOG404 DCEC (iii)	4069	Geography of Haryana	3	1	0	4	80	20	100
10	16GEOG404 DCEC (iv)	4070	Urbanization in India	3	1	0	4	80	20	100
Compulsory Courses										
11	16GEOG405CC	4071	Fundamentals of Geographical Information Systems (Practical)	0	0	8	4	Practical Total Marks: 100 Distribution of Marks: Lab Work Test: 60 Record on Lab Work: 20 Viva-Voce: 20		
12	16GEOG406CC	4072	Geography of Water Resource	3	1	0	4	80	20	100
13.	Open Elective Course (OEC)*		Open Elective Course (OEC)	3	1	0	4	80	20	100
			Total Credits:				26			650

Note: *The student of M. Sc Geography shall fill one open elective course from common pool.

❖ Geography of India: Open Elective Courses as offered by the Department of Geography for the students of the other Department.

L – Lecture
Th – Theory;

P – Practical;
IA – Internal Assessment

T – Tutorial

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Total Credits (Semester: I+II+III+IV): 22+22+28+26=98

Total Marks (Semester: I+II+III+IV): 550+550+700+650 = 2450

DEFINITIONS OF COURSES

1. CORE COURSE(CC)


- Core Course (CC): Compulsory Course for the students of Geography.

2. DISCIPLINE CENTRIC ELECTIVE COURSES (DCEC):

- Discipline Centric Elective Courses (DCEC): Optional Courses within the Department.

3. OPEN ELECTIVE COURSES(OEC):

- Open Elective Courses (OEC): Optional Courses which are to be opted out of a pool of Courses from all departments as decided by the University.


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16GEOG101CC

Climatology

Exam course Code - 1061

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: It is an introductory course of climatology which is aimed at providing knowledge about the elements and processes of climates, different climatic types and climate change. Climate is one of the basic elements of physical environment which is a core area of interest for the students of geography.

Course Outcomes (COs): This course on climatology shall sharpen the understanding of students about different climatic systems found in the world. It shall develop scientific understanding about climates and their characteristics.

UNIT-I

1. Definition of weather and climate; Climatology and Meteorology.
2. Origin, composition and structure of atmosphere.
3. Solar radiation, greenhouse effect, heat budget and temperature distribution.

UNIT-II

4. Atmospheric pressure and its distribution pattern.
5. Theories of general circulation and planetary winds.
6. Walker circulation- ENSO and La Nina, origin of monsoons and jet streams.

UNIT-III

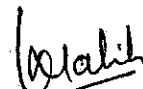
7. Atmospheric Moisture: humidity, evaporation, condensation; precipitation formation theories and types of precipitation, acid rain.
8. Stability and instability of atmosphere, air masses and fronts.
9. Weather systems: Origin and characteristics of extra tropical and tropical cyclones.

UNIT-IV

10. Climatic classification: Bases of climatic classification by Koeppen, Trewartha and Thornthwaite.
11. Climatic change: pattern, evidences and theories of climate change.
12. Global warming and its impacts on earth systems.

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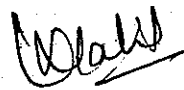
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Suggested Readings:

1. Trewartha G. T., An Introduction to Climate, McGraw Hill Company, New York, 1980.
2. Chritchfield, H J, General Climatology, Printice Hall of India, New Delhi, 1987.
3. Barry R. G. and Chorley, R. J, Atmosphere, Weather and Climate, Marthren , 2010.
4. Lal, DS, Climatology, Chetanya Publishing House, Allahabad, 1966
5. Das, PK, The Monsoons, National Book Trust, New Delhi, 1984
6. Ramasastry, AA, Weather and Weather Forecasting, Publication Division, New Delhi.
7. JM Collins, Climatology, Oxford, 2014.
8. Athrens, C D Meteorology Today: An Introduction to Weather, Climate and Environment, West Publishing Co., 1994.


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16GEOG102CC
Geography of India
Exam course Code - 1062

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: India is a country with diversity in landscape, vegetation, soils, drainage network, economy, population characteristics and culture. It is rich in resources and has got many minerals and power resources, which are the main assets of the country and are also exported. Therefore it becomes immense important to make the students know about their country.

Course Outcomes (COs): After studying Advanced Geography of India, students will become aware about the country's beautiful and diverse landscapes. They will acquire knowledge about the economy and valuable resources. This would also sharpen their understanding about the unity in diversity in India.

Unit-I

Physical Setting:

1. Physiography: Relief characteristics and physiographic divisions
2. Drainage systems and their functional significance.
3. Climate: characteristics, seasons and climatic regions of India as given by Trewartha and Koppen
4. Soil and vegetation types - distribution, characteristics and conservation.

Unit-II

Agriculture and Resources:

5. Agriculture: Characteristics of Indian agriculture, agricultural development in India
6. Problems of Indian agriculture.
7. Irrigation: Types of irrigation, Major irrigation projects: BhakraNangal, Narmada and Damodar Valley Projects
8. Green revolution and its impact on Indian agriculture

UNIT-III

Industry, Transport, Communication and Trade:

9. Production, distribution, status of use and conservation of metallic resources: iron ore and bauxite

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10. Production, distribution, status of use and conservation of non-metallic resources: mica and manganese
11. Production, distribution, status of use and conservation of power resources: Coal, Petroleum, Hydropower

Unit-IV

1. Production and distribution, status, use and conservation of (a) Iron and steel (b) Cotton textile and (c) Automobile industry (d) Sugar industry
2. Major industrial regions and their characteristics.
3. International trade: Major exports and imports.

Suggested Readings:

1. Centre for Science & Environment (1988). *State of India's Environment*. New Delhi.
2. Desphande, C.D (1992). *India: A Regional Interpretation*. ICSSR & Northern Book Centre, New Delhi.
3. Dreza Jean & Amartya Sen(ed.)(1996). *India Economic Development and Social Opportunity*, Oxford University Press. New Delhi.
4. Dubey. R.N. (1974). *Economic Geography of India*. Kitab Mahal, Allahabad.
5. Gautam, Alka (2014). *Advanced Geography of India*, 4th ED. Sharda Pustak Bhawan. Allahabad.
6. Hussain Majid (2015). *Geography of India*. Mc Graw Hill Education.
7. Joshi. H.L.(1990). *Industrial Geography of India*. Rawat Publications, Jaipur.
8. Khullar, D R. (2014). *India: A Comprehensive Geography*, 3rd ED. Kalyani Publishers. New Delhi
9. Kundu A and Raza, Moonis (1992). *Indian Economy: The Regional Dimension*, Speclaum Publishers. New Delhi 1992.
10. Nag. P. and Sengupta. S (1992). *Geography of India*. Concept publications. Co. New Delhi.
11. Rautray. J.K.(1993). *Geography of Regional Disparity*. Asian Institute of Technology, Bankok.
12. Robinson. Franes (1989). *The Cambridge Encyclopedia of India . Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan & Maldives*. Cambridge. University Press. London.
13. Sharma .T.C and Coutinno, O. (1988). *Economic and Commercial Geography of India*, Vikas Publishing House Pvt. LTD. New Delhi.
14. Singh R.L. (ed). (1971). *India – A Regional Geography*, National Geographical Society, India Varanasi.
15. Saroha Jitender & Singh Surender , *Geography of India*, 3rd edition, Pearson Publication.
16. Singh Surender , *Geography of India*, 2rd edition, GKP Access Publishing.
17. Spate OKH & ATA Learnont (1967). *India & Pakistan*, Methuen. London.
18. Tirtha, R. and Gopal Krishan (1996). *Emerging India*. Reprinted by Rawat Publications, Jaipur.
19. Tirtha. R and Krishan G. (1996). *Geography of India*, Rawat Publications, Jaipur & New Delhi.
20. Tiwari, R.C (2010). *Geography of India*, 6th Ed. Prayag Pustak Bhawan, Allahabad.

16GEOG103CC
Economic Geography
Exam course Code - 1063

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt FOUR long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The economy of the world has been changing fast in recent times. This has also led to drastic change in the spatial structure of economies world over. Therefore the objective of this course is to integrate the various factors of economic development to acquaint the students about dynamic aspects of economic geography.

Course Outcomes (COs): After completion of the course the students will be able to understand the spatial organization of economies in the world in relation to human activities, location theories of various activities, transport functions, trends of trade and processes of globalization.

UNIT-I

1. Definition, nature, scope, importance, recent trends and approaches in economic geography.
2. Relationship of economic geography with other social sciences.
3. Economic activities and their classification.

UNIT-II

4. Network structure and economic activities, impact of transport on economic activities, spatial variation in production and transport cost.
5. Location theories of Weber, Losch, Christaller, Edward Ullman's spatial interaction model.

UNIT-III

6. World Economies: bases of classification, patterns and characteristics of developed and developing economies of the world.
7. Economic development: meaning, evolution, goals, measures, patterns, problems and theories.

UNIT-IV

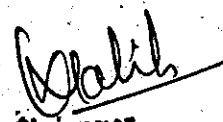
8. Globalization and recent trends in pattern of international trade.
9. Emergence of a new global economy-transnational integration and its spatial outcomes.
10. Major regional trade blocks of the world, free trade initiatives (GATT, UNCTAD, WTO).

w.e.f. – 2024-25

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Suggested Readings:

1. Gautam, A. 2010. Advanced Economic Geography. Sharda Pustak Bhawan, Allhabad.
2. Hartshorne, T. A. and Alexander, J. W. 2001. Economic Geography. Prentice Hall of India. New Delhi.
3. Hudson, R. 2005. Economic Geography. Sage Publication, New Delhi.
4. Jones, C. F. and Darkenwarld, G. G. Economic Geography. The Macmillan and Company. New York.
5. Knowled, R. and Wareing, J. 1992. Economic and Social Geography. Rupa and Company, Calcutta.
6. Knox, P. 2003. The Geography of World Economy. Arnold, London.
7. Saxena, H.M. 2013. Economic Geography. Rawat Publications, Jaipur.
8. Wheeler, J.O. and Muller, P.O. 1985. Economic Geography. John Wiley and Sons. New York.
9. Singh Surender & Saroha Jitender, Human & Economic Geography, Pearson Publication.


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16GEOG104CC
Statistical Methods in Geography
Exam course Code - 1064

L T P

3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt FOUR long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective of the course is to introduce the students to statistical tools for summarizing and analyzing quantitative information and data. The course includes various tools and techniques used in the analysis of geographical data.

Course Outcomes (COs): The course shall equip the students with statistical tools for summering, analyzing and finding spatial pattern from the geographical and other time series data.

UNIT-I

1. Descriptive Statistics : Histogram and Frequency Curve
2. Measures of Central Tendency: Mean, median, mode, Partitioned values: Quartiles and deciles, Comparing the mean, median and mode

UNIT-II

3. Normal curve as a probability distribution: characteristics and area under curve
4. Measures of Dispersion: Absolute measures: Range, Quartile Deviation, Mean deviation, Standard deviation, Relative measure of dispersion: Coefficient of variation
5. Measures of Inequality: (i) Location quotient (ii) Lorenz curve.

UNIT-III

6. Sampling: Theory of sampling, Methods of sampling, Sampling distribution and chance errors in sampling
7. Bivariate Analysis: Scatter diagram, correlation analysis, Spearman's rank correlation and Karl Pearson's correlation coefficient, Regression equations and Regression lines.

UNIT-IV

8. Residuals and their mapping
9. Basics of multivariate analysis: Correlation matrix, partial and multiple correlations.

w.e.f. – 2024-25

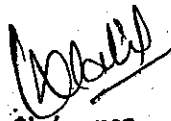
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Department of Geography
B.P.S.M.V. Khanpur Kale, Waniapat

Suggested Readings:

- 1 S. Gregory : Statistical Methods and the Geographers, Longman, London, 1964.
- 2 C. B. Gupta : An Introduction to Statistical Methods, Vikas Publishing House, Delhi, 1974.
- 3 R. J. Johnston : Multivariate Statistical Analysis in Geography, Longman Scientific and Technical, John Wiley & Sons, 1989 (4th edition).
- 4 Aslam Mahmood : Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi, 1993.
- 5 Saroj K. Paul : Statistics for Geoscientists : Techniques and Applications, Concept Publishing Company, New Delhi, 1998.
- 6 Reza Hoshmand (second edition), : Statistical Methods for Environmental and Agricultural Sciences, CRC Press, New York, 1998.
- 7 Jack Levin and J.A. Fox (2006), Elementary Statistics in Social Research, 10th edition, Pearson Education, New Delhi.
- 8 Rogerson. P.A. (2010), Statistical Methods for Geography, (A Student's Guide), 3rd Edition, Sage Publication, New Delhi
- 9 Ashis Sarkar (2013), Quantitative Geography: Techniques and Presentations
- 10 Orient Blackswan, Quantitative Methods in Human Geography.


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16GEOG105CC
Cartographic Methods in Geography (Theory)
Exam course Code - 1065

L T P
2 0 0

Credit – 2, Time: 2.5 Hrs.

Total Marks: 50
External Assessment Marks: 40
Internal Assessment Marks: 10

Note: Question 1 is compulsory comprising of four sub parts (two marks for each sub part), to be answered in 25-30 words. There will be six long questions, three from each unit. The candidate has to answer three long questions, at least one question from each unit. Question 1 carries ten marks. Long questions carry ten marks each.

Objective: The objective of this course is to give the students assignments for making maps, graphs and diagrams to represent climatic and socio-economic data.

Course Outcomes (COs): 1. Provides understanding about the basic concepts of cartography. 2. Enhancement of skills to prepare thematic maps and diagrams. 3. Acquaintance with representation of statistical data in the form of diagrams. 4. Ability to represent and interpret climatic data using diagrams.


UNIT-I

1. Nature and scope of Cartography.
2. Recent advancements in cartography.
3. Types and characteristics of distribution maps: (i) Chorochromatic (ii) Choroschematic (iii) Isopleths (iv) Choropleth (v) Dot and (vi) Diagrammatic.
4. Types and characteristics of statistical diagrams: (i) One dimensional (bar, line), (ii) Two dimensional (circular, rectangular, square), (iii) Three dimensional (block, sphere, cube) and (iv) Other diagrams (Snail, pyramid, flow diagram/cartogram).
5. Characteristics of graph/diagrams/maps representing climatic data: (i) Rainfall deviation; (ii) Climograph (Taylor and Foster), (iii) Hythergraph, (iv) Star/Wind rose diagram (v) Isopleths (vi) Line and bar (vii) polygraph.

UNIT-II

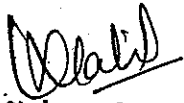
6. Introduction to Computer: Components of Computer-Hardware and Software; Use of Computers in Geography.
7. Introduction to Microsoft Excel, Microsoft Word, MS PowerPoint: Placement of heading and sub-heading, legend, Font size, Style, Bold, Italics, Changes from colour to different shade pattern. Different weight, colour and pattern to X and Y coordinates. Page layout. Ascending and Descending order.

w.e.f. – 2024-25


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B.P.S.M.V. Khanpur Kaler (Jipat)

Suggested Readings:

1. Misra, R.P. and Ramesh, A. 1999. Fundamentals of Cartography, Concept Publishing Company, New Delhi
2. Monkhouse, F.J. and Wilkinson, H.R. 1980. Maps and Diagrams. B. I. Publications, New Delhi.
3. Singh, R. L. 1986. Elements of Practical Geography. Kalyani Publishers, New Delhi.


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16GEOG106CC
Cartographic Methods in Geography (Practical)
Exam course Code - 1066

L T P
0 0 08
Credit – 04
Time: - 04 Hrs.

Max. Marks: 100
Distributions of Marks:
Lab Work Test: 60
Record on Lab Work: 20
Viva-Voce: 20

Note: The examiner shall set four questions, two from each unit. The candidate shall attempt three questions in all, selecting at least one question/exercise from each unit.

Objective: The objective of this course is to give the students assignments for making maps, graphs and diagrams to represent climatic and socio-economic data.

Course Outcome: The students will learn the art of cartography and methods of interpretation of maps and diagrams.

UNIT-I

1. Characteristics graph/diagrams and maps representation of Climate data:
 - Rainfall deviation diagram (1)
 - Climograph (Taylor and Foster's) (2)
 - Hythergraph (1)
 - Isopleth (1)
2. Diagrams: Types and properties of diagrams representing socio-economic data:
 - One dimensional diagrams-Bar diagram and line diagram: Simple (1), Comparative (1), Compound (1), Trend graph (1)
 - Two dimensional diagrams- pie diagram (1), proportional circle (1).
 - Three dimensional diagrams- Sphere, block, cube (1)
3. Type and Characteristics of Distribution maps: Chorochromatic, Choroschemetic, diagrammatic
 - Dot method (1)
 - Choropleth: Monovariate (1), Bivariate (1)
4. Characteristics of Miscellaneous diagrams and graphs:
 - Age and Sex pyramid (1)

UNIT-II

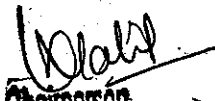
5. Input of data: Bar Diagram (4), Pie Diagram (2), Scatter Diagram (1), Line Graph (3), Poly graph (1)

Figures in parenthesis represent number of practical exercises.

w.e.f. – 2024-25

Suggested Reading:

1. Misra, R.P and Ramesh, A. (1999) Fundamentals of Cartography, Concepts Publishing Company. New Delhi.
2. Monkhouse, F.J and Wilkinson, H.R. (1980). Maps and Diagrams, B.I. Publications New Delhi.
3. Punmia. B.C. (1981). Surveying. Standard Book House. New Delhi.
4. Sharma. J.P (1961) Prayogik Bhoogol. Restogi Publications, Meerut.
5. Singh, R. L. 1986. Elements of Practical Geography. Kalyani Publishers, New Delhi.


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16GEOG201CC
Geomorphology
Exam course Code - 2061

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: Geomorphological knowledge helps in identifying the problems faced by human society, arising due to the interaction of human being with landscape and natural environment. The present course is aimed at providing the knowledge to students about the processes and patterns involved in shaping the features on land surface.

Course Outcome (CO's): Through the study of geomorphology, students shall get to know about formation of the earth's surface features, the role played by the humans in changing the landscape and the significance of landforms in shaping the physical environment in an area

UNIT-I

1. Introduction to geomorphology as a science: definition, nature, scope and recent developments.
2. Fundamental concepts:
 - (i) Geological structure and landforms
 - (ii) Uniformitarianism
 - (iii) Multi-cycle and polygenetic evolution of landscape
 - (iv) Climatogenetic geomorphology
 - (v) Peneplain and Pediplain


UNIT-II

3. Continental drift theory and its basic considerations; Plate tectonics-meaning and concept, margins and boundaries, plate motion and cycle; Tectonic activities along boundaries and distribution of plates.
4. Hill slope-definition and forms of slope, geomorphic processes and slope forms, slope evolution: down wearing, parallel retreat and slope replacement models.
5. Indogenetic Process: Faulting, Folding and their geomorphic expression.

UNIT-III

6. Exogenetic Process: Weathering:- Causes, types of weathering(physical, chemical and biological).

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7. Mass movement, causes, classification and types of mass movements- slow and rapid mass movements.

UNIT-IV

8. Geomorphic processes and resulting land forms: Fluvial, Glacial, Periglacial, Aeolian and Karst
9. Applied geomorphology: Meaning and concept, role of geomorphology in environmental management of the following: (i) Accelerated erosion and sedimentation, (ii) Construction of large dams (iii) Urban floods and Geomorphology

Suggested Readings:

1. Bloom AL. 2002. Geomorphology: A systematic Analysis of late Canozic landforms. Prentice – Hall Private Limited, New Delhi.
2. Embleton, C. Thormne, J. (eds) 1979. Process in Geomorphology. London, Edward Arnold.
3. Fourbridge, R. W. (Ed) 1968 Encyclopedia of Geomorphology, New York, John Wiley & Sons.
4. Kale VS and Gupta A.2001. Introduction to Geomorphology orient –Longman, Hyderabad.
5. Ritters D. F. Kochel, R. C. and Miller J. R., 1995, Process Geomorphology. Dubuque, Win C. Brown Publishers (3rdEdn).
6. Sharma H.S and Kale V.S(2009): Geomorphology in India, Prayag pustak Bhawan, Allahabad.
7. Sharma, V.K. (2010): Introduction to process Geomorphology. Tayler and Francis'S, London.
8. Sharma, V.K. (1992): Earth's surface, processes and forms. Tata Mc. Grawhill Publications, New Delhi.
9. Saroha Jitender & Singh Surender , Physical Geography, Pearson Publication.
10. Singh Surender: Geography, Mc. Grawhill Publications, New Delhi.
11. Singh S. (2002): Geomorphology, Prayag pustak Bhawan, Allahabad.
12. Strahler A.H (2013): Introducing physical geography, Wiley and sons, New York.
13. Tasbuck, E.J and Lutgers, F.K..(2009): Earth science, Prentice hall, New Jersey.
14. Thornburry, W.D (2004): Principles of Geomorphology, John Wileys Sons, New York.


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16GEOG202CC
Population Geography
Exam course Code - 2062

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective of the course is to acquaint the students with the sources of population data, dynamics of population and their determinants and assessment of the impact of policy interventions

Course Outcome (CO's): The students shall learn about the population data sources and various theories models and measures of population dynamics and international community efforts to improve quality of human resource.

UNIT-I

1. Nature and scope of population geography.
2. Sources of population data, quality and reliability of data, problems of mapping population data.

UNIT-II

3. Concept, determinants and world pattern of the following attributes of population:
 - (i) Distribution and density
 - (ii) Vital rates: birth and death rates
 - (iii) Migration (including laws of migration)
 - (iv) Growth
 - (v) Age and Sex Composition
 - (vi) Occupation
 - (vii) Literacy
5. Quality of human resource: human development index and its components.


UNIT-III

6. Limits to growth: Concepts of over population, under population and optimum population
7. Demographic Transition Model
8. Population Resource Regions
9. Theories of population: Malthus, Ricardo and Marx

UNIT-IV

10. Population problems and Population policy of India

w.e.f. – 2024-25



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11. Comparative study of population problems and policies of developed and less developed countries. Case study of U.S.A., Japan, China and Brazil

Suggested Readings:

1. Beaujeu, Garnier, J. (1966) Geography of Population, Longman, London.
2. Brooks, S. (1977): The World Population Today (Ethno demographic Process), USSR Academy of Sciences, Moscow.
3. Cassen, Robert & Bates, Lisa M. (1994): Population Policy : A New Consensus Overseas Development Council, Washington, D.C.
4. Chandna, R. C. (1997): Jansankhya Bhugol, Kalyani Publishers, New Delhi.
5. Chandna, R. C. (1998): Population, Publishers, New Delhi.
6. Chandna, R. C. (1998): Environmental awareness, Publishers, New Delhi.
7. Chandna, R. C. (1998): Geography of Population: Concepts, Determinants and Patterns, Publishers, New Delhi.
8. Clarks, John, I. (1971): Population Geography and the Developing Countries, Pergamon Press, New York.
9. Demko, G. J. and others (Eds.) (1971) : Population Geography, Reader, McGraw-Hill Books Co., New York
10. Hassan, I. (2010): Population Geography,
11. Jones, Huw, R. (1981) : A Population Geography, Harper and Row Publishers, London.
12. Mahajan, N (2014) Population Geography, R.K. publishers, Delhi
13. Newbold, K Bruce (2016) Population geography: Tools and Issues,
14. Petrov, V. (1985): India: Spotlight of Population, Progress Publishers, Moscow.
15. Qazi, S.A (2010). Population Geography, APH publishers.
16. Trewartha, G. T. (1972): The Less Developed Realm-A Geography of its Population, John Wiley & Sons, Inc., New York.
17. Trewartha, G. T. (1978): The More Developed Realm- A Geography of its Population Pergamon Press, New York.
18. Woods, R. (1979): Population Analysis in Geography, Longman, London.


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16GEOG203CC
Oceanography
Exam course Code - 2063

L T P

3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The objective is to introduce the students the basic concepts of oceanography such as movement of oceanic water, temperature and salinity distribution etc.

Course Outcome (CO's): It will acquaint the students with the basic concepts of oceanography.

Unit -I

1. Definition, nature and scope of oceanography, oceanography and other sciences.
2. Wegner's drift hypothesis and sea floor spreading and plate tectonics.

Unit – II

3. Major topographic features of ocean basins, bottom relief of Atlantic, Pacific and Indian oceans.
4. Sources, classification and distribution of ocean deposits, corals-origin, types and conditions for development. Theories of the origin of coral reefs (Subsidence and standstill).

Unit – III

5. Oceanic Temperature and Density: distribution and causes of variation.
6. Composition of oceanic water and distribution of salinity.
7. Origin, causes, types and effects of the ocean currents, currents of the Atlantic, Pacific and Indian oceans.

Unit – IV


8. Oceans as source of food, mineral and energy resources – evidences, mechanism and impact.
9. Global warming and sea level changes: Impact of Humans on the Marine Environment.

Suggested Reading:

1. Davis Richard. J.A. (1986). Oceanography – An Introduction to the Marine Environment, Wm. C. Brown. Iowa.
2. Denny. M. (2008): How the Ocean Works: An introduction to Oceanography, Princeton University Press, New Jersey.

w.e.f. – 2024-25

3. Duxbury, C.A and Duxbury B. (1996). An introduction to the World's Oceans, 2nd C. Brown, Iowa
4. Garrison, T. (1995): Essentials of Oceanography, Wards worth Pub. Co., London.
5. Garrison, T. (2001): Oceanography – An introduction to Marine Science, Books/ Cole, Pacific Grove, USA.
6. Gross, M. Grant (1987). Oceanography: A view of the Earth, Prentice – Hall Inc., New Jersey.
7. Kennel, J.P. (1982): Marine Geology, Prentice hall, Englewood Cliff, New Jersey.
8. Kerhsaw, S. (2004): Oceanography: An Earth Science Perspective, Routledge, UK.
9. King, C.A.M. (1962): Oceanography for Geographers.
10. Lal, D.S. (2007). Oceanography. Sharda Pustak Bhawan, Allahabad.
11. Sharma, R.C.(1985): The Oceans, Rajesh Publication, New Delhi.
12. Sharma, R.C. and Vatal M. (1993). Oceanography for Geographers, Chaitanya Publishing House, Allahabad.
13. Shepart, F. (1969): The Earth Beneath the sea, Athneum, Rev. Ed., New York.
14. Sieboldt, E., and W.H. Berger (1994): The Sea Floor, 2nd Ed., Freeman, New York.
15. Siddhartha, K.1999. Oceanography-A Brief Introduction, Kisalaya Publications, New Delhi.
16. Singh. Savinder. (2008). Oceanography. Prayag Pustak Bhawan, Allahabad Singh


 Chairperson
 Department of Geography
 B.P.S.M.V. Khanpur Kalan, Sonapat

16GEOG204DCEC
Agricultural Geography
Exam course Code - 2064

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective of this course is to acquaint the students with the spatial organization of agriculture and processes determining the agricultural pattern and processes. The students will develop an in-depth knowledge about the dynamics of land use, cropping pattern and the factors involved in change of agricultural landscape.

Course Outcome (CO's): The students shall get to know about the spatial organization of agricultural activities in world and India. Their knowledge about the origin, location, distribution of the agricultural activities shall be enriched. They would also get the knowledge about the modern agriculture, its dynamics and impact of climate change and economic liberalization on agricultural pattern and processes.

UNIT-I

1. Nature, scope and significance of agricultural geography.
2. Origin and dispersal of agriculture in the World.
3. Determinants of agricultural patterns: physical, technological and cultural factors


UNIT-II

4. Concepts of land capability survey, land use and cropping pattern.
5. Agricultural Concepts: (i) Intensity of Cropping (ii) Degree of Commercialization (iii) Crop diversification and concentration (iv) Crop combination (v) Contract farming (vi) Agri-business.
6. Approaches in agricultural regionalization: Von Thunen Model of agricultural land use, Agro-climatic zonation: Concept and Indian experience.

UNIT-III

7. Bases of identification of agricultural systems by Whittlesey and agricultural typology by Kostrowiki.
8. Measurements of agricultural efficiency and productivity.
9. Green revolution: Its impacts and consequences in India.

w.e.f. – 2024-25



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UNIT-IV

10. Food production and security in India.
11. Neo-liberalization and Indian agriculture.
12. Agriculture and climate change: Impacts and adaptation.

Suggested Readings:

1. Symons, Leslic (1967): Agricultural Geography, G. Bell and Sons, London.
2. Geoffrey, H.F.: (1970) Geography of Agriculture: Themes in Research, Practice Hall, N.J.
3. Morgon, W.B. and Munton, R.J.C.: (1971) Agricultural Geography Methuen, London.
4. Singh Jasbir and Dhillon S.S. (1994) Agricultural Geography, Tata Mc Graw Hill, New Delhi.
5. Husain, Majid (1996), Systemic Agricultural Geography Rawat Publications, Jaipur.
6. Tarrant, J.R. (1974) Agricultural Geography, Willey, New York.
7. Safi, Mohammad (2007) Agricultural Geography.
8. Singh Jasbir (1989) Agricultural Geography.
9. Bowler TR (1992): The Geography of Agriculture in Developed Market Economics, Longman.
10. Grigg D (1995) Introduction to Agricultural Geography, Routledge, London.


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2021

16GEOG205CC

Morphometric and Hypsometric Analysis (Theory)

Exam course Code - 2065

L T P

2 0 0

Credit – 2, Time: 2.5 Hrs.

Total Marks: 50

External Assessment Marks: 40

Internal Assessment Marks: 10

Note: Question 1 is compulsory comprising of four sub parts (two marks for each sub part), to be answered in 25-30 words. There will be six long questions, three from each unit. The candidate has to answer three long questions, at least one question from each unit. Question 1 carries ten marks. Long questions carry ten marks each.

Objective: The objective of this course is to make the students learn the morphometric tools by applying them in the analysis of relief, drainage pattern and slope.

Course Outcome (COs): Familiarization with arrangement, identification and interpretation of topographical sheets. Acquaintance with the concept of drainage basin and its linear and areal properties. Provides understanding about relief aspects of drainage basin. Development of understanding about slope and various methods of its analysis.

UNIT-I

1. Morphometric Analysis of Drainage Basin: Types and its geographical significance;
2. Arrangement, identification and interpretation of topographical sheets of India.
3. Delineation of drainage basin and its geographical significance.
4. Profile: Transverse and longitudinal.
5. Drainage network analysis: Linear and areal properties.
6. Relationship between stream order, number and length.

UNIT-II

7. Relief aspect of drainage basin: (i) Area-height curve, (ii) Altimetric frequency curve, (iii) Hypsographic curve, (iv) Hypsometric integral curve (v) Clinographic curve.
8. Development of slope and various methods of its analysis (Wentworth and Smith's method).

Suggested Readings:

1. Dury, G.H. 1966. Essays in Geomorphology, Heinmann, London.
2. Misra, R.P. and Ramesh, A. 1999. Fundamentals of Cartography, Concept Publishing Company, New Delhi.
3. Miller, A. 1964. The Skin of the Earth. Methuen, London
4. Monkhouse, F. J. and Wilkinson, H.R. 1980. Maps and Diagrams. B.I. Publications, New Delhi.
5. Singh, R. L. 1986. Elements of Practical Geography, Kalyani Publications, New Delhi.

w.e.f. – 2024-25

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Department of Geography

B.P.S.M.V. Khanpur Kalan, (Punjab)



16GEOG206CC

Morphometric and Hypsometric Analysis (Practical)

Exam course Code - 2066

L T P

0 0 08

Credit – 04

Time: - 04 Hrs.

Max. Marks: 100

Distributions of Marks:

Lab Work Test: 60

Record on Lab Work: 20

Viva-Voce: 20

Note: The examiner shall set four questions, two from each unit. The candidate shall attempt three questions in all, selecting at least one question/exercise from each unit.

Objective: The objective of this course is to make the students learn the morphometric tools by applying them in the analysis of relief, drainage pattern and slope.

Course Outcome (CO's): The course shall provide the students an opportunity to practice the use of tools and methods applied in morphometric analysis.

Unit –I

- 1. Interpretation of toposheets :** (a) Physical features and (b) Cultural features (2)
- 2. Delineation of Watershed** (All the exercises of morphometry shall be based on delineated watershed) (1)
- 3. Profile Analysis – Transverse and Longitudinal Profile**
 - a) Serial Profile (1)
 - b) Superimposed Profile (1)
 - c) Composite Profile (1)
 - d) Projected Profile (1)
 - e) Longitudinal Profile (1)
- 4. Linear Aspects:**
 - a) Relationship between Stream ordering and Stream number based on Horton and Strahler (2)
 - b) Relationship between Stream ordering and Average Stream Length (1)
 - c) Bifurcation ration (1)
- 5. Areal Aspects:**
 - a) Stream frequency (1)
 - b) Drainage density (1)

Unit –II

- 6. Relief Aspects:**
 - a) Area Height Curve (1)
 - b) Hypsometric curve (1)
 - c) Integral Hypsometric curve (1)
 - d) Clinographic or Clinometric Curve (1)
 - e) Altimetric frequency curve. (1)


7. Slope Analysis:

- a) Wentworth's method of Average Slope (1)
- b) G. H. Smith's Method of Relative Relief (1)

Figures in parenthesis represent number of practical exercises

Suggested Readings:

- 1. Dury, G.H. (1966), Essays in Geomorphology, Heinmann, London.
- 2. Misra, R.P. and Ramesh. A. (1999): Fundamentals of Cartography, Concept Publishing Company, New Delhi.
- 3. Dury, G.H. (1966). Essays in Geomorphology. Heinmann, London.
- 4. Misra, R.P. and Ramesh, A. (1999). Fundamentals of Cartography, Concept Publishing Company, New Delhi.
- 5. Monkhouse, F. J. and Wilkinson, H.R. (1980). Maps and Diagrams. B.I. Publications, New Delhi.
- 6. Singh, R. L. (1986). Elements of Practical Geography, Kalyani Publications, New Delhi.


Chairperson
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16GEOG301CC
Regional Planning and Development
Exam course Code - 3061

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective of the course is to develop an understanding of the processes, pattern and practice of regional development in India. This will expose students to development theories and strategies and planning concepts and broaden their perspective regarding regional disparities in India and the need of regional planning to overcome it.

Course Outcomes (COs): Students shall develop understanding about regional development processes, models adopted for development, regional disparities, challenges and strategies to overcome the disparities.

UNIT-I

1. Concept of Regional Development:, Regional disparities, Balanced Regional development
2. Region and its typology,
3. Basis of regionalization in India and their characteristics.

UNIT-II

4. Theories of Regional Development:
 - (i) Trickle Down Theory
 - (ii) Growth Pole Theory
 - (iii) Cumulative causation Model
 - (iv) Core-Periphery Theory

UNIT-III

5. Development and Regional Disparities in India since Independence
 - (i) Disparities in Agricultural Development
 - (ii) Disparities in Industrial Development.
6. Disparities in Human Resource Development in terms of poverty, education and health

UNIT-IV

7. India through Planned Era with special reference to
 - (i) Tribal area development plan
 - (ii) Hill Area development plan
 - (iii) Desert, drought prone and backward area development plan
8. Niti Ayog : Aims and objectives
9. Urban Planning in India with special reference to National Capital Region

w.e.f. – 2024-25


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Department of Geography
B.P.S.M.V. Khanpur Kaler, Jharkhand

Suggested Readings:

1. Chandna, R.C. (2000): Regional Planning: A Comprehensive Text. Kalyani Publishers., New Delhi.
2. Chaudhuri, J.R. (2001) : An Introduction to Development and Regional Planning with special reference to India. Orient Longman, Hyderabad.
3. Friedmann, J. and Alonso, W. (ed.) (1973) : Regional Development and Planning. The MIT Press, Mass.
4. Hettne, B.; Inotai, A. and Sunkel, O.(eds.) (1999-2000): Studies in the New Regionalism. Vol. I-V. Macmillan Press, London.
5. Kuklinski, A.R. (1972): Growth Poles and Growth Centres in Regional Planning. Mouton and Co., Paris.
6. Kuklinski, A.R. (ed.) (1975): Regional Development and Planning: International Perspective, Sijthoff-Leydor.
7. Leys, C. (1996): The Rise and Fall of Development Theory. Indian University Press, Bloomington, and James Curry, Oxford.
8. Mahapatra, A.C. and Pathak, C.R. (eds.) (2003): Economic liberalization and Regional Disparities in India. Special Focus on the North Eastern Region. Star Publishing House, Shillong.
9. Mahesh Chand and V. K. Puri ; Regional Planning in India, Allied Publishers, New Delhi, 1983.
10. Misra, R.P. (ed.) (1992): Regional Planning: Concepts, Techniques, Policies and Case Studies. 2nd edition. Concept Publishing Company. New Delhi.
11. Misra, R.P. and Natraj, V.K. (1978): Regional Planning and National Development. Vikas, New Delhi.
12. Planning Commission of India: Eighth Five Year Plan (1992-97) Vol. I, Govt. of India, New Delhi.
13. Sundaram K V (1986) : Urban and Regional Planning in India, Vikas Publishing House, 1986, New Delhi
14. Raza Moonis (ed) (1988) Regional Development Vol. 10, Contribution to Indian Geography Heritage Publishers, New Delhi.
15. Kundu and Moonis Raza (1988): Indian Economy: The Regional Dimension, CSRD/SSS, JNU. New Delhi.
16. Patnaik, C S (1981), Economics of Regional Development and Planning in Third World Countries, Associate Publishing House, New Delhi.


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16GEOG302CC

Introduction to Remote Sensing and Research Methodology (Theory)

Exam course Code –3062

L T P

3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective is to provide exposure to students regarding use of new techniques in obtaining geographical data. It shall introduce the students to the processes of satellite remote sensing data acquisition and the application of digital information in real time mapping. The objective of the course to make students develop an understanding of the concept of Research in geography, Research Problems, Research Design, Data Collection and Sampling Design.

Course Outcomes (COs): The course will equip the students with state of art concepts and methodologies of remote sensing technology. The course shall equip the students with the understanding of different aspects of research. The students will learn about the significance of Research in Geography.

Unit -I

1. Aerial Photographs: History, definition and advantages and limitations. Types of aerial photographs and resolution. Mirror Stereoscope. Elements of aerial photo interpretation.
2. Remote Sensing, definition and scope, EMR and spectrum. Interaction of EMR with atmosphere and earth surface features. Atmospheric window. Remote Sensing Platforms and Sensors. Orbits, Resolution and types of remote sensing.

Unit- II

3. Concept of Multispectral and Thermal remote sensing. Major earth resource Satellites of India.. Indian Space Program and characteristics of Indian remote sensing satellite and data.
4. Digital Image processing and application: Image classification: supervised and unsupervised. Applications in resource mapping and monitoring.

Unit-III

5. Introduction to Research in Geography: meaning, objectives, types and significance of field work.

6. Defining Research Problems: Meaning of Research problem; Selection of Research problem; Need for defining a research problem; Techniques involved in defining a problem; Limitations of the Research problem

Unit-IV

7. Research Design: Important concepts related to Research design; Types of Research design- exploratory, descriptive and experimental. Formulation of Hypothesis.

8. Data sources and Data Collection: types of data- primary and secondary; Sources of data, methods of collecting primary data- observation method, interview method, Questionnaire and Schedule; difference between questionnaire and Schedule

Suggested Readings:

1. Avery T.E. and G.L. Berlin (1992): Fundamentals of Remote Sensing and Air Photo Interpretation, 514 Ed. Macmillan, New York, USA.
2. Aggarwal C.S. and P.K. Garg (2000). Remote Sensing, A.H. Wheeler & Co. Ltd, New Delhi.
3. Bhattacharya, B (Campbell, J.B. (2002) Introduction to Remote Sensing, 3rd ed., Taylor & Francis, New York, USA.
4. Jensen, J.R. (2000), Remote Sensing of the Environment: An earth Resource Perspectives, Pearson Education Inc. India.
5. Lillesand, Thomas M. and R. Kiffer (1994), Remote Sensing and Image Interpretation, 3rd edition, John Willy & sons, Inc New York, USA.
6. Nag and Kudrat (2002), Remote Sensing and Image Interpretation, Concept Publishers, Delhi.
7. Meenakhi Kumar (2000), Text book on Remote Sensing; NCERT, New Delhi.
8. Reddy, Anji (2000) Remote Sensing and Geographical Information System (An Introduction), Hyderabad.
9. Sabins, F (1982): Remote Sensing Principles and Application, Freeman and Compere, New York, USA.
10. Burrough, P.A. and McDonnell, R. (1998): Principles of Geographic Information Systems. Oxford University Press, Oxford.
11. Chang, K.T. (2003): Introduction to Geographic Information Systems. Tata McGraw Hill Publications Company, New Delhi.
12. Ahmed El-Rabbany: Introduction to GPS, 2nd ed., Artech House, Boston
13. Chauniyal, D. D. (2004): Remote Sensing and Geographic Information Systems. (in Hindi). Sharda Pustak Bhawan, Allahabad.
14. Demers, M. N. (2000): Fundamentals of Geographic Information Systems. John Wiley and Sons, Singapore.
15. Prithvish Nag and Samita Sengupta.
16. Har Prasad (1992): Research Methods and Techniques in Geography, Rawat Publishers, Jaipur.
17. Mishra, H.N. and Singh V.P. (ed.) (1998): Research Methodology: Social, Spatial and Policy Dimensions, Rawat Publishers, Jaipur.

18. Goode and Hat, Research Methodology in Social Sciences, Oxford University Press, New Delhi.
19. Johnson, R.J. (1978): Multivariate statistics in Geography, Longman, London.
20. Black James A and D.J. champion (1976): Methods and Issues in social Research, New York, John Wiley and Sons, Inc.
21. Kothari, C.R. (2004). Research Methodology: Methods and Techniques, 2nd Ed., New Age International Publishers, New Delhi.
22. Kumar, R. (2005): Research Methodology: Step by Step Guide for Beginners, 2nd Pearson, Australia, p-7.
23. Mishra, H.N. and Singh, V.P.(2002), Research Methodology in Geography: Social, Spatial and Policy Dimensions, Rawat Publication, Jaipur.
24. Dey, I. (1993), Quantitative Data Analysis, Routledge, London.
25. Somekh, B. and Cathy, L. (2005). Research Methods in the Social Sciences, Vistaar Publications, New Delhi.

(Signature)
Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kalan (Distt. Jalandhar)



16GEOG303DCEC (i)
Fluvial Geomorphology
Exam course Code - 3063

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: Fluvial geomorphological knowledge helps in identifying the problems faced by human society, arising due to the interaction of human being with landscape and natural environment. The present course is aimed at providing the knowledge to students about fluvial system, sediment transfer processes and major types of channels, the processes, awareness and management flood plain management.

Course Outcomes (COs): 1. Acquaintance with the basic concepts of fluvial system. 2. Familiarization with sediment transfer processes and major types of channels. 3. Cognizance of flood forecasting and management techniques. 4. Awareness about flood plain management using geospatial technology.

UNIT-I

1. Fluvial System: types, variables, feedbacks, thresholds, responses and scales in fluvial geomorphology.
2. Water erosion: types of water erosion and erosive processes, monitoring of water erosion (field measurements and models) management problems associated with erosion.

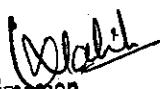
UNIT-II

3. Sediment transfer: sources, modes, storage, movement and measurement of sediment load and yield, controls as sediment yield, human activity and sediment yield.
4. Channel forms and processes: channel types, geometry, size, shape, channel pattern, bedrock channels and associated land forms.

UNIT-III

5. Floods: Flood frequency, magnitude, forecasting and structural and non-structural adjustment to floods, catastrophic and paleo floods.

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6. Impact of construction activities on fluvial systems.

7. Human adjustment in floodplains.

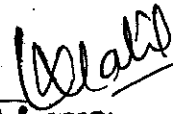
UNIT-IV

8. Managing River channels: channelization and flow regulation; impacts of water management on the physical, chemical and ecological condition of channels and floodplains, river restoration.

9. Remote sensing and GIS applications in mapping, monitoring and management of fluvial environments.

Suggested Readings:

1. Charlton, R. 2008. Fundamentals of Fluvial Geomorphology, Routledge, London
2. Chorley R.J. 1973. Introduction of Fluvial Processes. Methuen and Company, London.
3. Fryirs, K.A. and Brierley G.J. 2013. Geomorphologic Analysis of River Systems, Wiley Blackwell, Chichester.
4. Gregory K.J. 1977. River Channel Changes. John Wiley and Sons, New York.
5. Gregory K.J. and Walling, D.E. 1985. Drainage Basin: Forms and Process-A Geomorphological Approach. John Wiley and Sons, New York.
6. Kingston D. 1984. Fluvial Forms and Processes. Edward Arnold, London.
7. Kondelf, G.M. and Piegay, H. 2003. Tools in Fluvial Geomorphology. Wiley, Chichester.
8. Leopold C.B. 1964. Fluvial Processes in Geomorphology. Freeman, London.
9. Morisawa. 1981. Fluvial Geomorphology. George Allen and Unwin, London.
10. Robert, A. 2003. River Processes-An Introduction to Fluvial Dynamics, Hodder Education.


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16GEOG303DCEC (ii)
Urban Geography
Exam course Code - 3064

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt FOUR long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The objective is to enlighten the students about the basics of urban geography, world urbanization pattern, morphology and land use of cities, social- economic, functional and spatial dimensions of urban centers and their various theoretical conjectures.

Course Outcomes (COs): The students shall be acquainted with various urban concepts, urban economic base, urban functions, urban core- periphery interaction and various theories and models.

UNIT-I

1. Urban Geography: nature, scope, approaches and concepts.
2. Origin and evolution of towns and factors of urban growth: theories of urban origins.
3. The global context of urbanization and cycle of urbanization.

UNIT-II

4. Economic base of cities: concept and employment ratio.
5. Functional classification of cities: concepts and scheme of classification.
6. Rural Urban Fringe: structural characteristics and its development.

UNIT-III

7. City and region: concepts of influence and dominance, methods of delimitation of area of influence and area of dominance.
8. Urban morphology and land use structure: city core, commercial, industrial and residential areas.
9. Models of city structure: concentric zone model by E.W. Burgess, sector model by Homer Hoyt, multiple nuclei model by Harris and Ullman.

UNIT-IV

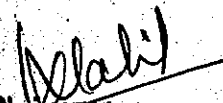
10. Social area analysis; Bases of residential segregation.

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11. Rank size rule
12. Law of primate city.

Suggested Readings:

1. Mayer H.M. and Kohn, C.F. (1968), Readings in Urt. The University of Chicago Press, Chicago.
2. Berry, J.E. & et al. (Eds.), 1970, Geography Perspective on Urban System, Prentice Hall, New Jersey.
3. Cater, Herald (1972), The study of Urban Geography, Edward Arnold, London.
4. Johnson, J (1974), Suburban Growth, John Wiley and sons, London.
5. Kaplan; Wheeler and Holloway(2007) Urban geography, John Wiley, USA
6. Clark, D (1982), Urban Geography, Croom Halm, London and Cambridge.
7. Northern, R.M.(1979) Urban Geography, john Wiley, Toronto.
8. Michanel Pacione (2004) Urban Geography: a global Perspective, Routledge, USA.
9. Ramachandra,R(1992) Urbanization and Urban System in India, Oxford, London.
10. Raymond and Murphy (1960) The American cities: An urban geography, McGraw hills, NewYork.
11. Sinha, S.P. (1984), Processes and Pattern of Urban Development in India: A.C. study of Haryana, The associated Publishers, Ambala Caltt.
12. Singh Surender & Saroha Jitender , Urban Geography, Pearson Publication.


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16GEOG303DCEC (iii)
Resource Geography
Exam course Code - 3065

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective is to create awareness among the students about resource availability, accessibility, distribution and its use or misuse. It also enlightened them to theoretical evaluation and conservation and management of resources for sustainable development.

Course Outcomes (COs): Students will become sensitized to resource their types, availability and use or misuse, its impact on environment and will learn conservation methods and techniques. They shall become aware about the ongoing international efforts to mitigate environment problems and legal provisions.

UNIT-I

Concept and Scope of Resource Geography; Resource and ecosystem services: concept and types of resources: classification of resources- changing profile and concerns; understanding relationship between natural resources and development process, and livelihoods with special reference to poor in the developing world.


UNIT-II

Natural resource: Soil resources, Water Resource, Forest Resource and Mineral Resources. Future Prospects of Natural resources.

UNIT-III

Models of Natural Resources Process: Zimmermann's Primitive and Advance Models of natural resource process- population, resources and carrying capacity, Kirk's Decision Model, Brookfield System Model.

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UNIT-IV

Conservation and Management of Natural Resources: Meaning and Concept of conservation of Natural Resources, Conservation and Management Methods of Natural resources: Soil Resource, Water Resource, Forest Resource and Mineral Resources, Problems of Natural Resource Management in India. Policies for sustainable resource - based development.

Suggested Readings:

1. Barbier, Edward B (2005) Natural Resources and Economic Development, Cambridge University Press.
2. Borton, I and R W Kates (1984) Readings in Resource Management and Conservation, University of Chicago Press, Chicago.
3. Bruce, Mitchell (1989) Geography and Resource Analysis, John Wiley and Son, New York.
4. Fabricius, C & Eddie Koch Eds. (2004) Rights, Resources and Rural Development: Community based Natural Resource Management in Southern Africa, Earthscan, London Sterling.
5. Das Gupta, Biplab (1979) the Environmental Debate, Economic and Political Weekly, Vol.13, No. 6/7, Annual Number (Feb., 1978), pp. 385-387+389+391+393+395+397-400.
6. Eliot Hurst, M E (1972) A Geography of Economic Behaviour: An Introduction, Duxbury Press, California.
7. Guha, J L and P R Chattroj (1994) Economic Geography- A Study of Resources, The World Press Pvt. Ltd. Calcutta
8. Kates, R.W. & Burton, I (eds): Geography, Resources and Environment, Vol I & II, University of Chicago Press, Chicago, 1986.
9. M Laren, D.J. and Skinnnet, B.J.(eds.): Resources and World Development, John Wiley & Sons, New York, 1986.
10. Martino, R L (1969) Resource Management. Mc Graw Hill Book Co., London.
11. Negi, B S (2000) Geography of Resources, Kedar Nath and Ram Nath, Meerut.
12. Owen, Oliver, S (1971) Natural Resource Conservation: A Ecological Approach, McMillion, New Delhi.
13. Raja, M (1989) Renewable Resources, Development, Concept Pub. New Delhi.
14. Ramesh, A (1984) Resource Geography (Ed.) R P Misra, Contribution to Indian Geography, Heritage Publishers, New Delhi.
15. UNDP & World Resource Institute (2005) The Wealth of the Poor—Managing Ecosystems to Fight Poverty, World Resources Institute, Washington, DC 20002
16. Zimmermann, E. W. (1951) World Resources and Industries, Harper and Brothers, New Delhi.

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16GEOG303DCEC (iv)
Rural Settlement Geography
Exam course Code - 3066

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3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt FOUR long questions, selecting one from each unit. All questions carry 16 marks each.

Course Outcomes (COs): 1. Understanding about the fundamental concepts of settlement geography. 2. Enhancement of knowledge about types and patterns of rural settlements 3. Acquaintance with various social issues in rural settlements. 4. Knowledge about environmental issues and rural development planning in India.

UNIT-I

Rural Geography: Meaning, Nature and Scope. Types of Community Facilities and services- water sanitation, electricity.

Provider of community facilities- governmental, Non-governmental and philanthropic. originations: Community facilities and services programs.

UNIT-II

Rural House Type: House Types based on Building Materials. Size and Shape as basic for classification: House Type based on Socio-Economic Status: Regional Patterns of House in India.

UNIT-III

Rural Development in India: Determinants of rural development: Approaches in rural development: Community development approaches. Target approaches, integrated approach, participatory development approaches: Sustainable rural development.

Issues of Rural Development in India: Land Reforms, Agricultural Land use. Rural Poverty, Rural Unemployment. Rural educations, health and health care delivery systems.

UNIT-IV

Rural Planning: District and Block level planning: Area specification projects/programs-Tribal Area Development and Integrated Wasteland Development program: Agricultural specific Programs: High Yielding Variety program. Integrated Rural Development Programs (IRDP)

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Suggested Reading:

1. Alam. S. Mel at. (1982). *Settlement System of India*. Oxford and IBH Publication Co. New Delhi.
2. Armendera (1998). *Poverty, Rural Development and public Policy*: Deep and Deep Publishers, New Delhi.
3. Chisholm, M. (1967): *Rural Settlements and Land Use*. John Willey, New Delhi.
4. Clout .H.D (1977): *Rural Settlements and Land Use*. John Willey, New Delhi.
5. Das. K.D. (2007). *Dynamics of Rural Development*. Deep and Deep Publishers, New Delhi.
6. Garg. A. (1992): *Working and Impact of Integrated Rural Development Programme*. Deep and Deep Publishers. New Delhi.
7. Hudson, F.S. (1976) *A Geography of Settlements*. Mac Donald & Evans, New York.
8. Jha. U.M. (1995) *Rural Development in India: Problems and Prospects*.
9. Madan, G.R (2010): *Indian Rural Problems*, Radha Publications. New Delhi.
10. Mandal. R.B (1988) *Systems of Rural settlements in Developing Countries*, Concept Publication, New Delhi.
11. Mandal, R.B (2001). *Introduction to Rural Settlements*, Concept Publication, New Delhi.
12. Misra. H.N. (1987) *Rural Geography*. Vol. IX Contributions to Indian Geography, Heritage Publishers New Delhi.
13. Mishra. S.K. and Puri. V.K. (2009). *Indian Economy*. Himalaya Publishing house, New Delhi.
14. Nath. V. (2010). *Rural Development and Planning in India*. Concept Publication, New Delhi.
15. Nikkiran. S. and Ramesh G. (2010) *Research methods in Rural Development*, Deep and Deep Publication, New Delhi.
16. Rai. S. (2005) *Kurukshetra*, Ank, 12. October, Gramin Vikas Mantralaya, New Delhi
17. Sahu. B.K. (2003). *Rural Development in India*, Anmol Publishers, Delhi.
18. Satendra and Sharma, V.K. (2004). *Sustainable Rural Development for Disaster Mitigation*, Concept. New Delhi.
19. Shah. G. Thorat S. et al. (2006) *Untouchability in Rural India*. Sage Publication, New Delhi.
20. Singh. R.L (1976). *Geographic Dimensions of Rural Settlements*, NGSI, Varanasi.
21. Singh. R.L (1976). And K.N Singh Ed (1975). *Readings in Rural Settlements Geography*, NGSI, Varanasi.
22. Singh. R.Y. (1994): *Geography of settlements*. Rawat Publication, New Delhi.
23. Singh. R.Y. (2005). *Adhiwas Bhugol*. (in Hindi) Rawat Publication, New Delhi.
24. Sinha, R.N.P., *Geography and Rural Development*: Manohar Publisher and Distributions, New Delhi.
25. Sinha S.P & Singh .S. (2007). *Strategies for Sustainable Rural Development*, Deep and Deep Publishers, New Delhi.

16GEOG304DCEC (i)
Geography and Disasters Management
Exam course Code - 3067

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective of this course to develop among the students an understanding about the geographical dimensions of different types of disasters. It also introduces the students to concepts and practices of disaster mitigation and recovery, impacts of disasters and role of RS and GIS in disaster prevention.

Course Outcomes (COs): The course shall make the students aware about the risk of occurrence of different types of disasters in various parts of world. It will also appraise them about the mitigation and recovery mechanisms of disasters.

UNIT-I

1. Disasters and Hazards: Definition, nature and classification.
2. Geography and disasters: major disasters of world, disaster profile of India
3. Tectonic Disasters: Volcanoes, Earthquakes, Tsunamis, Landslides.

UNIT-II

4. Hydrological Disasters: Floods and Droughts
5. Climatic Disasters: Cyclones and Heavy Precipitation events
6. Human Induced Disasters: Epidemics, Industrial and Transport Disasters; Wars and Terrorism induced Disasters


UNIT-III

7. Disaster Management in India: Policy and Organizational Structure setup.
8. Disaster Vulnerability and Affecting Factors.
9. Planning for Disaster Mitigation Measures and Preparedness.

UNIT-IV

10. Post Disaster Recovery and Rehabilitation
11. Impacts of Disaster on Society and Economy


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12. Remote Sensing and GIS Applications in Disaster Prevention and Monitoring.

Suggested Readings:

1. laikie, P and other (1994) At Risk: Natural Hazards, People's Vulnerability and Disasters, Routledge, London.
2. Carter, NW (1991), Disaster Management: A Disaster Manager's Handbook, ADB, Manila.
3. Cuny, FC (1983) Disasters and Development, Oxford University Press.
4. Hewitt, K (1977) Regions of Risk: A Geographical Introduction to Disasters, Longman, Harlow.
5. Kates RW and I Burton (1986) Geography, Resources and Environment, Vol. I & II, Themes from the work of Gilbert F White, The University of Chicago Press, Chicago
6. Smith K (1996) Environmental Hazards: Assessing Risks and Reducing Disasters, Routledge, London.
7. Varley, A, Disaster, Development and Environment, John Wiley and Sons, Chichester.
8. National Policy on Disaster Management, 2009, Ministry of Home Affairs, Govt. of India, New Delhi.


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16GEOG304DCEC (ii)
Soil Geography
Exam course Code - 3068

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The main aim of this course is to appraise the students about soil formation processes and geographical distribution of soils in the world. The course shall cover the fundamental processes, development, classification and mapping of this resource.

Course Outcomes (COs): Study of Soil Geography shall make the students understand the significance of soil resources in the development of the society. It should also make the students to internalize the relationship between soils and other natural resources.

UNIT-I

1. Nature and scope of Soil Geography.
2. Soil formation factors (Parent material, flora and fauna, climatic and topographic) and Processes of soil formation and soil development (physical, biotic and chemical).
3. Soil profile and its characteristics (zonal, azonal and intra zonal soils).

UNIT-II

4. Physical properties of soils: morphology, (texture, structure, colour, porosity and permeability), water, air and temperature.
5. Chemical properties of soils: soils reaction and controlling factors, soil clays, organic matter and humus.
6. Biological properties of soils (Soil organisms).


UNIT-III

7. Soil classification: genetic, taxonomic and 7th Approximation, their characteristics and world patterns.
8. Soil erosion and Degradation Processes

UNIT-IV

9. Conservation methods to improve the physical qualities of soils.

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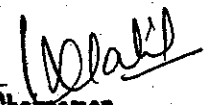
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10. Methods and mechanism of soil survey.
11. Soil reclamation and management, integrated soil and management.

Suggested Readings:

1. Birkland P.W (1999): Soil and Geomorphology, oxford university press, Inc., New York.
2. Brady Nyle C.; Weil Raymond C. (2012): The nature and Properties of soils, Pearson publishing, Prentice hall of India, Pvt. Ltd. New Delhi.
3. Brickland, PW. 1984. Soils and Geomorphology. Oxford University Press, London.
4. Buckman, H.O and Brady, N.C. 1960. The Nature and Properties of Soils. MacMillan, New York.
5. Bunting, B.T.: The Geography of Soils, Hutchinson, London, 1973.
6. Clark, GR. 1957. Study of Soil in the Field, Oxford University Press, Oxford.
7. Daji, JA. 1970. A Text Book of Soil Science. Asia Publishing House, New Delhi.
8. Fenwick I.M and knapp B.J (1982): Soils – Processes and Response, Unurin Brothers Ltd.; The Greshman press, survey.
9. Foth H.D. and Turk LM. 1972. Fundamentals of Soil Science. John Wiley, New York.
10. Govinda Rajan, S.V and Gopala Rao, H.G.: Studies on Soils of India. Vikas Publications, New Delhi, 1978.
11. Mc. Bride, M.B.: Environmental Chemistry of Soils, Oxford University Press, New York, 1999.
12. Pitty, A.F. 1978. Geography and Soil Properties. University Press, London.
13. Ray choudhuri, S.P.: Soils of India, ICAR, New Delhi, 1958.
14. Sehgal, J. 2000. Pedology- concepts and Applications. Kalyani Publications, New Delhi.


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16GEOG304DCEC (iii)
Political Geography
Exam course Code - 3069

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The objective is to acquaint the students with conceptual framework of geo-political issues and assessment of Indian position in the emerging geo-political situation.

Course Outcomes (COs): The students shall be groomed to grasp the conceptual framework of geo-political issues and role and status India in contemporary geo-political situation.

UNIT-I

1. Nature and scope of political geography, its approaches and recent trends.
2. School of thoughts: political economy, world system, globalization.

UNIT-II

3. Concept of nation, state and nation-state, nationalism and nation building, emergence and growth of territorial state, globalization and the crisis of the territorial state forms of governance: unitary and federal.
4. Distinction between frontiers and boundaries, demarcation of boundaries, classification and functions of boundaries.
5. Landlocked state: advantages and disadvantages.

UNIT-III


6. Global strategic views: Mahan and Sea power; Mackinder and Heartland; Spykman and Rimland, Servasky and Air power.
7. Geo-politics in the post cold war world- S.B. Cohen's model of geo-politics.

UNIT-IV

8. Emergence of India as regional power: Geo-political significance of Indian and Pacific Ocean.
9. Geo-political issues in India with special reference to water disputes and riparian claims.
10. Gerrymandering and electoral abuse in India.
11. Kashmir problem and Indo-Pak relations.

Suggested Readings:

1. Alexander, L.M. World Political Patterns Ran Mc Nally, Chicago, 1963.
2. De Blij, H.J. and Glassner, Martin: Systematic Political Geography, John Wiley, New York, 1968.
3. Dikshit, R.D. Political Geography: A Contemporary perspective, Tata McGraw Hill, New Delhi, 1996.
4. Dikshit, R.D. Political geography: A Century of Progress, Sage, New Delhi, 1999.
5. Sukhwai, B.L. Modern Political Geography of India Sterling publishers, New Delhi, 1968.
6. Taylor, Peter: political Geography Longman, London, 1985.
7. Fisher Charles A.: Essays in Political Geography, Methuen, London, 1968.
8. Pounds N.J.G.: Political Geography. McGraw Hill, New York, 1972.
9. John R. Short: An introduction to Political Geography Routledge, London, 1982.
10. Moddie, A.E: Geography Behind Political Hutchinson, London, Latest edition.
11. Prescott. J.R.V.: The Geography of Frontiers and Boundaries Aldine, Chicago.
12. Deshpande C.D: India-A Regional Interpretation Northern Book Centre, New Delhi, 1992.
13. Panikkar K.M.: Geographical Factors in India History: 2 Vols, Asia Publishing House Bombay, 1959.


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16GEOG304DCEC (iv)
Bio Geography
Exam course Code - 3070

L T P

Total Marks: 100

3 1 0

Credit – 4, Time: 3 Hrs.

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt FOUR long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective is to introduce the concept of biogeography, evolution and dispersal of flora and fauna, interaction between living and non-living organisms with physical environment, conservation of resources and human adaptation and adjustment to diverse environment.

Course Outcomes (COs): Students shall learn the significance of bio-geography, origin and evolution of flora and fauna, their dispersal over space and environmental hazard and laws to protect biodiversity and clean and safe environment.

UNIT-I

1. Nature, scope and significance of biogeography.
2. Basic ecological principles: Bio-energy cycle in territorial ecosystem; energy budget of the earth; trophic levels and food web.
3. Origin of fauna and flora: Major gene centers; domestication of plants and animals and their disposal agents and roots.

UNIT-II

4. Distribution of plant life on the earth and its relation to soil, climate and human activities.
5. Geographical distribution of animal life on the earth and its relation to vegetation types, climate and human activities.

UNIT-III

6. Communities-Nature of communities and ecosystems: bio-diversities; human induced communities' change; habitat decay and conservation of biotic resources.
7. Industrial effluent and its effect on fresh water and marine biology.

UNIT-IV

8. Environmental hazards: Ecological consequences, human perception and adjustment with respect to flood, drought and earthquake.
9. Bio-Reserves in India.
10. National forest and wild life policy of India.

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Suggested Readings:

1. Agarwal, D.P.: Man and Environment in India through Ages, Book & Books, 1992.
2. Bradshaw, M.J.: Earth and Living Plant, ELBS, London, 1979.
3. Cox, C.D. and Moore, P.D.: Biogeography: An Ecological and Evolutionary Approach 5thedn. Blackwell, 1993.
4. Gaur, R.: Environment and Ecology of Early Man in Northern India R.B. Publication Corporation, 1987.
5. Hoyt, J.B.: Man and the Earth, Prentice Hall, U.S.A. 1992.
6. Huggett, R.J.: Fundamentals of Biogeography. Routledge, U.S.A. 1998.
7. Lillies, J.: Introduction of Zoogeography, McMillan. London. 1974.
8. Khushoo, T.N. and Sharma, M.(eds.): Indian Geosphere-Biosphere Har-Anand Publication, Delhi 1991.
9. Lapedes, D.N. (ed.): Encyclopedia of Environmental Science, McGraw Hill, 1974.
10. Mathur, H.S.: Essentials of Biogeography, Anuj Printers, Jaipur, 1998.
11. Pears, N.: Basic Biogeography 2ndedn. Longman, London, 1985.
12. Simmon, I.G.: Biogeography, Natural and Cultural, Longman, London 1974.
13. Tivy, J.: Biogeography: A study of Plants in Ecosphere 3rdedn. Oliver and Boyd, U.S.A., 1992.
14. WWF related website
15. Wild Life Institute of India Publications

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16GEOG305CC

Practical of Remote Sensing Techniques and Report writing of socio-economic data

Exam course Code - 3071

L T P
0 0 8

Credit – 04, Time: - 3 Hrs.

End sem. Max. Marks: 100

Distribution of Marks: 50+50

RS Techniques Practical exercise: 3x10=30.

RS Technique based Record: 10

Viva-Voce: 10

Note: The students will have to write a project report based on field survey which shall be duly supervised by the teacher.

Objective: The objective of the course is to teach the acquisition of skills of measurements on aerial photographs, capability of reading and interpreting physical and socio-economic features on photographs, acquaintance with different digital data products and software for the processing of satellite data, enhancement of skills about processing and extracting features from satellite imageries. Student is able to learn the techniques and tools used in the analysis of socio-economic data by applying them on the data collected through field survey and drawing inferences and interpretations.

Course Outcome (CO's): 1. To train the students in skills related to satellite data processing.
2. The writing of the project report shall train the students in analysis and interpretation of socio-economic data obtained from the field.

Part -A

1. Basic information on aerial photographs (annotation and markings).
2. Identification of Fiducial marks, Principal point, Conjugate Principal points and Flight line. 1 exercise
3. Stereoscope vision
4. Interpretation and preparation of land use/land cover from aerial photographs 2 exercise
5. Preparation of interpretation key of satellite imageries 1 exercise.
6. Visual interpretation and preparation of land use/land cover from satellite imageries 1 exercise
7. Georeferencing of Satellite Data by georeferenced toposheet or GCP's 1 exercise
8. Digital classification of satellite data (supervised and unsupervised) 2 exercise

Part -B

Scheme of Evaluation of Project Report based on Socio- economic data:

1. Report writing: 30 marks
2. Viva voce on report: 20 marks

Note: The paper is compulsory and students have to visit to collect socio-economic data, financial assistance to students and teachers may be provided by the university.

w.e.f. – 2024-25

Wahid
Chairperson

Department of Geography

B.P.S.M.V. Khanpur Kairi (Jalpaiguri)

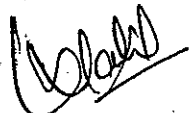
- 52 -

Suggested Readings:

1. Bhatta Basudeb (2014). Remote Sensing and GIS. Oxford University Press, Oxford.
2. Guha Pardeep (2013). Remote Sensing for the Beginner. East West Press, New Delhi.
3. Kumar Meenakshi 2001. Remote Sensing, NCERT, New Delhi.
4. Lillesand and R.W. Kiefer, 2005. Remote Sensing and Image Interpretation, John Wiley and Sons.
5. Pritvish Nag, and M. Kudrat 1998. Digital Remote Sensing, Concept Publishing Company, New Delhi.

***Note:** There should be two examiners for practical paper in this semester as there are papers of Research Methodology and Remote Sensing. As, it will be difficult to take viva and exam of both 50+50 in three hours.

w.e.f. – 2024-25


Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kaler, Sonapat

769-

16GEOG306 CC
Environmental Geography
Exam course Code – 3072

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The purpose of the course is to explain the students' various dimensions of the ecosystems, their spatial connotation, anthropogenic interventions and resultant impacts, international environmental summits and legal provisions for environment protection.

Course Outcomes (COs): The students will get exposed to the concept of ecosystem, its various processes, s, anthropogenic interventions and consequential impacts and world community's efforts to address such problems

UNIT-I

1. Environment Geography: meaning, nature and scope; fundamental concepts of Environment; Approaches and Methods in Environment Geography; Relationship with other branches of knowledge,
2. Environment: Definition and Meaning; Components of environment- abiotic & biotic types of environment.

UNIT-II

3. Concept of Ecosystem; Types, components and function of ecosystem.
4. Energy flow in ecosystem: food chain, food web, trophic levels, ecological production and ecological pyramids.
5. Biogeochemical cycles: Hydrological, carbon, oxygen and nitrogen cycles

UNIT-III

6. Environment Degradation – Nature, process, types and causes of Environment degradation, Types of environmental pollution, Sources and effects of environment pollution: air water and land,
7. Environment Hazard: Causes and Measures; Global warming and Climate change- Ozone depletion; Greenhouse effect; Acid Rain; Urban smog
8. Biodiversity and conservation: preservation and conservation of ecosystem through resource management.

UNIT-IV

9. Environment legislation: The Stockholm Conference, the Earth Summit, Kyoto Protocol and Paris declaration, Environment policy of India (post 2000 AD).

w.e.f. – 2024-25

10. Environmental laws in India: Wild Life Act, Water Act, Forest Act, Environment Protection Act and National Environment Tribunal Act.
11. Emerging environment issues in India, Environment conservation and management in India; Environment awareness and movement in India.

Suggested Readings:

1. Ackerman, E.A., Geography as a Fundamental Research Discipline, University of Chicago Research Papers, 1958.
2. Agarwal, A. and sen, S.: The Citizens Fifth Report. Centre for Science and Environment New Delhi 1999.
3. Bertalanffy, L. General Systems Theory, George Bragiller New York, 1958.
4. Bodkin, E.: Environmental Studeis, Charles E. Merrill Pub Co., Columbu, Ohio, 1982.
5. Chandna, R.C.: Environmental awareness, Kalyani Publishers, New Delhi, 1998.
6. Chorley, R.J., Geomorphology and General Systems Theory, U.S.G.S. Professional Paper, 500B, 1962.
7. Eyre, S.R. and Jones, G.R.J. (eds.), Geography as Human Ecology, Edward Arnold, London, 1966.
8. Kormondy, E.J.: Concepts of Ecology, Prentice Hall, 1989.
9. Manners, I.R. and Mikesell, M.W. (eds.), Perspectives on Environment, Commission on College Geography, Publ. No.13, Washington, D.C., 1974.
10. Nobel and Wright: Environmental Science, Prentice Hall, New York 1996.
11. Odum, E.P.: Fundamentals of Ecology, W.B. Saunders, Philadelphia, 1971.
12. Russwurm, L.H. and Sommerville, E.(eds.): Man's Natural Environment- A systems Approach, Duxbury, Massachusetts, 1985.
13. Sharma, H.S.: Ranthambhore Sanctuary-Dilemma of Eco-development, Concept, New Delhi, 2000.
14. Simmons, I.G.: Ecology of Natural Resources, Edward Arnold, London, 1981.
15. Singh, S.: Environmental Geography, Paryag Publications, Allahabad, 1991.
16. Smith, R.L: Man and his Environment: An Ecosystem Approach, Harper & Row, London, 1992.
17. I.N.E.P.: Global Environmental Outlook, U.N. Pub, New York, 1998.
18. World Resources Institute: World Resources, (Latest Report) Washington D.C.
19. World Watch Institute: State of the World, Latest Report) Washington, D.C.

[Signature]
 Chairperson
 Department of Geography
 B.P.S.M.V. Khanpur Kaler (Sonapat)

16GEOG301OEC
Fundamentals of Geography
Exam course Code - 3073

L T P
3 1 0

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Credit – 4, Time: 3 Hrs.

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

UNIT-I

1. Solar system, solar and lunar eclipse; Earth- shape, movement, formation of days/nights and seasons; location- latitude-longitude and the time zones, International Date Line.

UNIT-II

2. Interior of earth; volcanism and earthquakes; plate tectonics; weathering and erosion; brief introduction to major landforms.

UNIT-III


3. Weather and climate: factors affecting and distribution; composition and structure of atmosphere;
4. Atmosphere pressure and global winds; introduction to Monsoon.

UNIT-IV

5. Relief of oceans; oceanic salinity; circulation of oceanic water; currents of Atlantic, Pacific and Indian Oceans.

Suggested Readings:

1. Leong, G.C. Certificate Physical and Human Geography, Oxford University Press, New Delhi, 2015.
2. Getis, A., Bjelland, M. and Getis V. Introduction to Geography, McGraw Hill Education, 2014.
3. Singh, S. Physical Geography, Pravalika Publication, Allahabad.
4. Strahler, A. Introducing Physical Geography, John Wiley & Sons, Inc.


Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kalan (Jalandhar)



16GEOG401CC
Geographical Thought
Exam course Code - 4061

L T P

3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of 8 subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective of this course is to introduce the students to the history, philosophy and methodology of geography. The postgraduate students of geography must have an idea about the course of development of the discipline in terms of changes in its philosophy and methodological innovations.

Course Outcomes (COs): The course would appraise the students about the development of geography as a scientific discipline. It would help them in assessing the positive aspects and shortcomings of the discipline.

UNIT-I

1. Classification of knowledge, Nature of Geography and its place among sciences
2. Nature of Geographic knowledge during ancient (Greek and Roman) and medieval (Arab) periods
3. Foundation of Modern Geography-contributions of Varenius, Kant, Humboldt and Ritter.

UNIT-II

4. Emergence of Geography as a study of (i) physical features (ii) chorology (iii) landscapes.
5. Concepts in Geography: Environmental Determinism and Possibilism, Areal Differentiation;
6. Dichotomy and Dualism in Geography: Physical vs Human Geography, and Systematic vs Regional Geography

UNIT-III


7. Quantitative Revolution-Emergence of geography as spatial science
8. Positivist Explanations in Geography- Laws, theories, models
9. Inductive & deductive logic in geographic explanations

UNIT-IV

10. Behavioural and Humanistic Perspectives in Geography
11. Social Relevance in Geography- Welfare, Radical and Feminist Perspectives
12. Postmodernism and Geography.

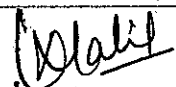
w.e.f. – 2024-25

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Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kaler (Jalpaiguri).

Suggested Readings:

1. Dickinson, R E (1969), The Makers of Modern Geography, London.
2. Dikshit, RD (1997), Geographical Thought- A Contextual History of Ideas, Prentice Hall of India, New Delhi.
3. Harvey David (1989), Explanation in Geography, Edward Arnold, London.
4. Hartshorne, R (1959), Perspectives on the Nature of Geography, Rand MacNelly, Chicago.
5. James PE and Martin J Geoffrey (1972) All possible Worlds, John Wiley and Sons, New York.
6. Johnston, RJ (1983) Geography and Geographers, Edward Heinemann, London
7. Peet, Richard (1998) Modern Geographical Thought, Oxford, Blackwell Publishers.
8. Gaile GL and Willmott CJ, Geography in America at the Dawn of 21st Century, Oxford, 2003.
9. Holt-Jonson, Arild, Geography, History and Concepts: A Study's Guide, Sage, 2011.
10. Cresswell Tim, Geographic Thought: A critical introduction, Wiley- Blackwell, 2013.


Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kaler (Sonapat)

16GEOG402CC

Fundamentals of Geographical Information System (Theory)

Exam course Code - 4062

Exam course Code - 3073

L T P

2 0 0

Credit – 2, Time: 2.5 Hrs.

Total Marks: 50

External Assessment Marks: 40

Internal Assessment Marks: 10

Note: Question 1 is compulsory comprising of five sub parts (two marks for each sub part), to be answered in 25-30 words. There will be six long questions, three from each unit. The candidate has to answer three long questions, at least one question from each unit. Question 1 carries ten marks. Long questions carry ten marks each.

Objective: The objective is to provide exposure to students regarding acquaintance with the fundamentals of Geographical Information Systems, capability to differentiate the data types in geographical information systems, understanding about the applications of geographical information systems in resource mapping and knowledge about types and functioning of global positioning system

Course Outcomes (COs): The course will equip the students with state of art concepts and methodologies of GIS and GPS technology.

UNIT-I

1. GIS: definition and scope; components and elements of GIS.
2. Concept of geoid and spheroid. Coordinate projection system: implications of spherical and planar coordinate systems and their transformations in GIS.
3. Geographic data: spatial and non-spatial; spatial data structure: raster and vector; data base management system.

UNIT-II

4. Spatial analysis: overlay, neighborhood and proximity; integration of raster and vector data; applications of GIS in urban, social, disaster and resource mapping, monitoring and management.
5. Fundamentals of Global Positioning System (GPS): concept and principles; GPS devices; GPS system: NAVSTAR, GALILIO and GAGAN; applications of GPS.

Suggested Readings:

1. Burrough, P.A. and McDonnell, R. (1998). Principles of Geographic Information Systems. Oxford University Press, Oxford.
2. 2. Bhatta Basudeb (2014). Remote Sensing and GIS. Oxford University Press, Oxford.
3. 3. Chang, K.T. (2003). Introduction to Geographic Information Systems. Tata McGraw Hill Publications Company, New Delhi.
4. 4. Demers, M. N. (2000). Fundamentals of Geographic Information Systems. John Wiley and Sons, Singapore
5. 5. Heywood I, Cornelius S and Carver S. (2000). An Introduction to Geographical Information Systems, Longman, New York.



16GEOG403DCEC (I)
Geography of Tourism
Exam course Code - 4063

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective of this course is to appraise the students about the tourist resources in different parts of India. It brings out the eco-tourist potentials in different physiographic regions namely Northern Mountains, Plains, Peninsula, Coastal regions and beautiful Islands.

Course Outcomes (COs): Through this paper the students will internalize the importance of and the role played by the tourism industry in India. They will also get to know about the various important destinations and their ecological settings.

UNIT-I

1. Definition, nature, scope and significance of tourism geography.
2. Factors influencing tourism: historical, physical, socio-cultural and economic.

UNIT-II

3. Motivating factors of tourism: leisure, recreation, spiritual, attraction of site and situation.
4. Infrastructure and support system of tourism accommodation and supplementary accommodation.

UNIT-III

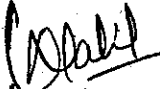
5. Eco-Tourism potentials in India with reference to northern mountains and plains, peninsula, coastal regions and islands.
6. Impact of tourism: physical, economic and social.

UNIT-IV

7. Environmental laws and tourism.
8. Impact of globalization and foreign capital on tourism development.
9. Government policies for tourism development.

Suggested Readings:

1. Bhatia A.K. Tourism Development; Principles and Practices. Sterling Publishers, New Delhi 1996.
2. Bhatia, A.K. International Tourism – Fundamentals and Practices, Sterling, New Delhi (1991).
3. Chandra R.H.: Hill Tourism: Planning and Development, Kanishka Publishers, New Delhi 1998.
4. Hunter C and Green H: Tourism and the Environment: A Sustainable Relationship, Routledge, London, 1995.
5. Inskip E: Tourism Planning: An Integrated and Sustainable Development Approach, Van Nostrand and Reinhold, New York, 1991.
6. Kaul R.K. Dynamics of Tourism & Recreation. Inter-India, New Delhi (1985).
7. Kaur J.: Himalayan Pilgrimages & New Tourism Himalayan Books, New Delhi, 1985.
8. Lea J.: Tourism and Development in the Third World, Routledge, London, 1988.
9. Molton D.: Geography of World Tourism Prentice. Hall, New York, 1993.
10. Pearce D.G. Tourism To-day: A Geographical Analysis, Harlow, Longman, 1987.
11. Robinson, H. A Geography of Tourism. Macdonald and Evans, London, 1996.
12. Sharma J.K. (ed): Tourism Planning and Development – A New Perspective Kanishka Publishers, New Delhi 2000.
13. Shaw G. And Williams A.M. Critical issues in Tourism-A Geographical perspective, Oxford: Blackwell, 1994.
14. Sinha P.C. (ed): Global Tourism: The Next decade, Oxford, Butterworth, Heinemann, Oxford, 1994.
15. Voase R Tourism: The Human Perspective Hodder & Stoughton, London, 1995.
16. Williams A.M. and Shaw G. (eds): Tourism and Economic Development- Western European Experiences, London.


Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kaler (Unipat)

16GEOG403DCEC (ii)
Tropical Climatology
Exam course Code - 4064

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective of this course is to appraise the students about the processes, dynamics and pattern of climate in the tropical area. It would also underline the significance of tropical climates and their impact on earth systems beyond tropics.

Course Outcomes (COs): This course would make the students understand the processes and resultant climatic pattern in tropical areas. It will also help them in establishing the linkages between tropical climates and weather systems in mid and high latitudes.

UNIT-I

1. Nature and scope and significance of Tropical Climatology.
2. Energy balance in tropical areas
3. Temperature distribution in tropical areas.

UNIT-II

4. Atmospheric Pressure and circulation in tropical areas-Hadley Cell
5. Walker Circulation, ENSO.
6. Monsoons-Theories of origin and characteristics and areas of influence

UNIT-III

7. Tropical Cyclones-Origin and characteristics.
8. Tropical Rainfall-Dynamics and distribution.
9. Heavy Precipitation events in tropical areas

UNIT-IV

10. Tropical Climates-Classification and-characteristics.
11. Tropical Climates and agriculture: Human Adaptation to Tropical Climates.
12. Impact of Global Warming on Tropical Climates and Biomass.

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Suggested Readings:

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

(Signature)
Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kalan, Sonipat

16GEOG403DCEC (iii)
Geography of Health and Well-being
Exam course Code - 4065

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt FOUR long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The objective of the course to make students develop an understanding of the concept of social wellbeing in the context of space. The students shall study the human development index and parameters of wellbeing.

Course Outcomes (COs): The course shall equip the students with the understanding of socio-economic inequalities prevailing in the society and their spatial dimensions. The students will learn about the significance of wellbeing in the society.

UNIT-I

1. Geography of Health Nature, Scope, Approaches to the study of Health Geography. Concept of Disease Ecology, Epidemiology. Welfare Geography: Concept of social well-being, development and approaches to study human welfare.
2. Human beings: needs and wants, quality of life, level of living and state of well-being in India, identification of social indicators, their data sources and problem.

UNIT-II

3. Human Development Index, poverty and its measures, poverty and inequality in India
4. Gender issues in the process of development and gender development index.

UNIT-III

5. Structure of education in Independent India, Regional patterns of educational development; enrolment and dropouts with reference to school education.
6. Financing education and education policy in India.

UNIT-IV

7. Health programmes and National Health Policy in independent India.
8. Nutritional Security in India.


Suggested Readings:

1. Ahmad, Aijazuddin, Social Geography, Rawat Publication, New Delhi, 1999.

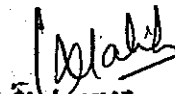
w.e.f. – 2024-25

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Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kalan, Sonapat

2. Dreze Jean, Amartya Sen, Economic Development and Social opportunity, Oxford University Press, New Delhi, 1996.
3. Sen, Amartya & Drze Jean, Indian Development: Selected Regional Perspectives, Oxford University Press, 1966.
4. David M.Smith (1977), Human Geography: A Welfare Approach, Arnold Heinemann.
5. D.M.Smith (1973), The Geography of Social Well-being in the United States. M.cGraw- Hill, New York.
6. D.M. Smith (1977); Where the Grass is Greener: Geographical perspectives on inequality, Penguin, Haemonds worth.
7. Coates, B.E., R.J. Johnston and P.L. Knox (1977), "Geography and Inequality", Oxford University Press, London.
8. National Nutrition Monitoring Bureau (2000), "Dynamic Database on Diet and Nutrition", National Institute & Nutrition, Hyderabad.
9. Draze, Jean and Amartaya Sen (2002), India: Development and Participation, OUP, New Delhi,
10. Uma Kapila (2007) (ed). India's Economic Development Since 1947. Academic Foundation.


Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kalar (Sonapat)

16GEOG403DCEC (iv)
Cultural Geography
Exam course Code - 4066

L T P

3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt FOUR long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The objective of the course is to introduce the students to the concepts of development of culture aspects and practices.

Course Outcomes (COs): The course shall make the students Enrichment of knowledge about main civilizations of world. It helps to enhancement of knowledge about factors and processes of cultural diversity. Acquaintance with racial classification and distribution in the world and awareness about changing characteristics of Indian society in regional context.

UNIT-I

1. Definition, nature and scope of Cultural Geography; cultural elements and components of culture.
2. The evolution of Human Civilizations with special reference to: Mesopotamia, the Nile Valley, the Indus Valley and the Hwang Ho Valley.

UNIT-II

3. Bases of cultural diversity and cultural transformation- race, religion and language.
4. Cultural landscape and cultural ecology.
5. The speed and efficiency of operation of cultural processes.

UNIT-III


6. Race, evolution of race, criteria of racial classification, theories of the classification of races-Zones and Strata or Migration Zone Theory of race evolution.
7. Classification of Races: Major races of the world: Nordics, Mongoloids, Negroids and Caucasoids.
8. Racial Classification in India- Sri Risley, A. C. Haddon, B. S. Guha.

UNIT-IV

9. Tribes of India with main emphasis on Naga, Khasis, Todas, Bhils and Santhals.
10. Patterns of livelihood: Various economic activities, cultural adaptations; agriculture, industrialization and modernization, technological changes and their geographical implications.

Suggested Readings:

1. Craig, Mike (1998) Cultural Geography, Routledge Publications, London.
2. DeBlij, Harm J. (1977) Human Geography, Cultural Society and Space, John Wiley and Sons, New York.
3. Dickens, S.N. (1970) Introduction to Cultural Geography, Xerox College Publishing House, Waltham, Massachusetts.
4. Magunder, D. N. (1973) Races and Culture of India, Asia Publishing House, New Delhi.
5. Mukerjee, A.B. and Aijazuddin A. (1985) India: Culture, Society and Economy, Inter-India Publications, New Delhi.
6. Spencer, J.E. and Thomas, W.L. (1973) Introducing Cultural Geography, John Wiley and Sons, New York.
7. Taylor G. (1971) The Geography in the Twentieth Century, Asia Publishing House, New Delhi.
8. Wagner, P. L. and Mikesell, M. (1962) Readings in Cultural Geography, the University of Chicago Press, Chicago.


Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kala (Sonapat)

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16GEOG404DCEC (i)
Social Geography
Exam course Code - 4067

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: The objective of the course to make students understand the society and social structure in spatial context. It shall appraise the students about social space and spatial distribution of tribes, caste territories, religions and linguistic regions in India.

Course Outcomes (COs): This course shall equip the students with the understanding of spatial dimensions of the societal characteristics and organizations in India. It will make them understand the processes and patterns of social change and transformation in spatial context.

UNIT-I

1. Nature and scope of Social Geography, its development and place among social sciences.
2. Sources and problems of data for study in Social Geography of India.
3. Social differentiation and region formation, social evolution, social space, social and spatial justice.

UNIT-II

4. Tribes: Social formations, rural-urban and spatial distribution and impacts of development.
5. Castes: Origin, caste and morphology of settlements, caste and clan territories and distribution of scheduled castes.

UNIT-III

6. Languages: Classification, historical processes of diffusion and geographical distribution, Linguistic regions
7. Religions: Origin, historical background and spatial distribution of religious groups, minority and segregation in space, communalism.


UNIT-IV

8. Social change and transformation in India, Modernization and Sanskritization
9. Rural-urban interaction and social change.
10. Social wellbeing: Overview of the concept.

Suggested Readings:

1. Ahmad, Aijazuddin, Social Geography, Rawat Publication, New Delhi, 1999.

2. Dreze Jean, Amartya Sen, Economic Development and Social opportunity, Oxford University Press, New Delhi, 1996.
3. Dubey, S.C.: Indian Society, National Book Trust, New Delhi, 1991.
4. Schwartzberg Joseph; An Historical Atlas of South Asia, University of Chicago Press, Chicago, 1978.
5. Sen, Amartya & Drze Jean, Indian Development: Selected Regional Perspectives, Oxford University Press, 1996.
6. Smith, David: Geography: A Welfare Approach, Edward Arnold, London, 1977.
7. Sopher, David.: An Exploration of India, Cornell University Press, 1980.
8. Subba Roa. Personality of India; Pre and Proto Historic foundation of India and Pakistan. M.S. University Baroda, Vadodara, 1958.


Chairperson
Department of Geography
B.P.S.M.V. Khanpur Kalan (Sonipat)

16GEOG404DCEC (ii)
Gender Geography
Exam course Code - 4068

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100

External Assessment Marks: 80

Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The objective of the course is to introduce the students to the concepts of growth and development of gender geography, issues empowerment of women and policies.

Course Outcomes (COs): 1. Understanding about growth and evolution of gender geography. 2. Awareness about feminism and gender issues. 3. Acquaintance with gender gaps and empowerment of women in spatial context. 4. Enhancement of knowledge about gender sensitive issues and policies in India.

UNIT-I

1. Growth and evolution of the discipline; its connotation; traditional concept of interdependence between men and women; emergence of patriarchy and capitalism and post-modern feminist movement.
2. Gender based demographic structure; gender gaps in infant mortality rates; maternal mortality rate; female infanticide; gender and longevity gap- their spatial variations.

UNIT-II

3. Male-Female involvement in Economic and Social Activities; multiple roles of women in land, water and forest resource management.
4. Involvement of women in household activities, agriculture, mining, construction, industry, service and informal sectors.

UNIT-III


5. Gender gaps in social and public life: education, wage differentials in economic activities, health care and nutrition.
6. Scope for bridging gender gap: empowerment of women and education, economic opportunities, access to reproductive health services, involvement in decision making processes in development and environmental management.

UNIT-IV

7. Gender and Neo-liberalization Policies in India.
8. Making of Gender geography in India.

Suggested Readings:

1. Boserup, E (1989) Women's Role in Economic Development. Earthscan, London.
2. Dankelman, I and Davidson, J (1989) Women and Environment in the Third World. Earthscan, London.
3. Deblig, H.J (1991) Human Geography-Culture, Society and Space, John Wiley, New York.
4. Haraway, D (1991) Simians, Cyberages and Women-The Reinvention of Nature. Routledge, New York.
5. Johnston, R.J (1996), The Dictionary of Human Geography, Blackwell, Oxford,
6. Koblinsky, M (1993) The Health of Women-A Global Respective. Westview Press, Boulder.
7. Lee, D (1988) Women in Geography-A Comprehensive Bibliography. Boca Raton, Florida.
8. Lewis, R. R (1995) Femininity and Representation. Routledge, New York.
9. Momsen, JH. and Townsend, J (1987) Geography of Gender in the Third World, Albany, New York.
10. Montagu, A (1964) Man's Most Dangerous Myth-the fallacy of Race. Cleveland.
11. Reagent, A.C. and Monk J.J (1982) Women and Spatial Change. Kendell & Hund, Dubuque, Lowe.
12. Rhodda, A (1991) Women and Environment. Zed, London,
13. Seager, J. and Olson, A. Women in the world – An International Atlas.
14. Sivant, R.L (1985) Women-A World Survey, World Priorities Washington, D.C.
15. Skjelsback, I and Smith, D (2001) Gender, Peace and Conflict. Sage, London.
16. Sowell, T (1994) Race and culture-A world View. Basic Books, New York.
17. UNICEF (1990) The Lesser Child-the Girl in India. United Nations, Geneva.
18. United Nations (1991) The World's Women, 1970-1990. United Nations, New York.


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16GEOG404DCEC (iii)
Urbanization in India
Exam course Code - 4069

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The objective of the course is to introduce the students to pattern and processes of urbanization and urban governance issues.

Course Outcomes (COs): On completion of the course the students will have ability to understanding about pattern and processes of urbanization, Acquaintance with contemporary urban infrastructure issues, augmentation of knowledge about urban social issues and awareness about urban governance issues.

UNIT-I

1. History of urbanization in India: Ancient, Medieval, Colonial and post-independence phases of urbanization.
2. Processes of urbanization: Socio- cultural, political, economic and geographical processes.
3. Patterns of urbanization: settlement structure, level of urbanization, criteria of measurement and spatial patterns of urbanization in India.
4. Recent trends of urbanization in India.

UNIT-II

5. Urban housing.
6. Urban transport.
7. Water crisis and water management.
8. Urban sanitation.
9. Solid waste management.

UNIT-III

10. Urban poverty: measures of poverty, status, causes and policies.
11. Slums: current status, causes and policies.
12. Urban crime and delinquency.
13. Marginalization of poor in urban space.
14. Squeezing of urban social space.


UNIT-IV

15. Role of urbanization in economic and social change.
16. Urban land management: land acquisition problem and policies.
17. National urbanization policy.
18. Urban regions of India: case studies of metropolitan regions of Delhi, Mumbai,

Kolkata, Chennai, Bangalore and Hyderabad.

Suggested Readings:

1. Ahluwalia, I.J., Kanbur, R. and Mohanty, P.K. (2014) Urbanization in India: Challenges, Opportunities and the Way Forward, SAGE India, New Delhi.
2. Alam, SM and Khan, W. (1972) Metropolitan Hyderabad and its Region: A Strategy for Development, Asia Publishing House, Bombay.
3. Amarjit, S. and Komol, S. (2020) Understanding Urbanization in Northeast India, Routledge.
4. Bhattacharya, B. (2006) Urban Development in India since Pre-Historic Times, Concept Publishing Company, New Delhi.
5. Denis, E. (2019) Subaltern Urbanization in India: An Introduction to the Dynamics of Ordinary Towns, Springer.
6. Forest, G.B. (2009) Cities of India, Shubhi publication.
7. Hust, E. and Mann, M. Urbanization and Governance in India, Manohar Publishers.
8. Kundu, A. (1992) Urban Development and Urban Research in India, Khanna Publication.
9. Mishra, R. P. (2019) Million Cities of India: Growth Dynamics, Internal Structure, Quality of Life and Planning Perspectives, IBP.
10. Purohit, A. (2011) Urbanization in India, Rosa publisher.
11. Nangia, S. (1976) Delhi Metropolitan Region: A study in Settlement Geography, Rajesh Publication.
12. Ramachandran, R. (1992) Urbanization and Urban Systems in India, Oxford press, London.
13. Rao V. L. S. P. Urbanization in India: Spatial Dimensions. Concept Publishing Co. New Delhi.
14. Rao V. L. S. P. (1979) The Structure of an Indian Metropolis: A study of Bangalore, Allied Publishers Bangalore.
15. Sharma, A.K. and Mishra, B.D. (2018) Urbanization in India: Issues and Challenges, Ane Publication, New Delhi.
16. Siva Ramakrishnan, K.C., Kundu, A. and Singh, B. N. (2005) A Handbook of Urbanization in India, Oxford University Press.


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16GEOG404DCEC (iv)
Geography of Haryana
Exam course Code - 4070

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consists of subparts (short notes not exceeding 50 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: Haryana is a state with diversity in landscape, vegetation, soils, drainage network, economy, population characteristics and culture. It is agriculturally developed state and has got many resources, which are the main assets of the country and are also exported. Therefore it becomes immense important to make the students know about their state.

Course Outcomes (COs): After studying Geography of Haryana, students will become aware about the state's beautiful and diverse landscapes. They will acquire knowledge about the economy and valuable resources. This would also sharpen their understanding about state.

UNIT-I

1. Haryana through the ages; Administration division of Haryana – A changing scenario.
2. Physiography; Climate; and Drainage system.
3. Flora and Fauna; Soils; Soil degradation and conservation.

UNIT-II

4. Mineral resource and energy sources.
5. Agriculture and its problems; Irrigation and its modes; Green revolution; Distribution of major crops- Wheat, Rice, Sugarcane, Cotton.
6. Horticulture Crops- Fruits, Vegetation and Flower cultivation; Mushroom farming Houses (Poly Houses); Animal husbandry, Dairying and Fisheries.

UNIT-III

7. Density, Distribution and Growth of population.
8. Sex Ratio; Literacy; and workforce.
9. Trend, Pattern and Characteristics of Urbanization in Haryana.


UNIT-IV

10. Emerging pattern of industrial development; Industrial policy of Haryana.
11. Distribution and concentration of major industries: Agro Industries and Automobile Industry; Agricultural Marketing.

12. Infrastructure Development – Transport, Information technology, health and education; Rural development and poverty alleviation; Tourism.

Suggested Readings:

1. Budda, P. Haryana through the Ages, Kurukshetra University, Kurukshetra.
2. Duggal, S.L. Soil- Geographical Zones of Haryana, Haryana Cooperative Press, Chandigarh.
3. Government of Haryana, Economic Survey of Haryana, 2016-17, Department of Economic and Statistical Analysis, Haryana.
4. Haryana State Gazetteers, Haryana State Gazetteer, Vol. 1 & II, Haryana Gazetteer Organization, Revenue Department, Chandigarh, 2005.
5. Roy, S. Urbanization in Haryana, Hindi ed., Radha Publications, New Delhi, 2000.
6. Singh, J. An Agricultural Geography of Haryana, Vishal Publication, Kurukshetra.
7. Singh, M. and Kaur, H. Economic Development of Haryana: An Era of Prosperity, Deep and Deep Publication Pvt. Ltd., New Delhi.


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16GEOG405CC
Practical Geography:
Fundamentals of Geographical Information Systems (Practical)
Exam course Code - 4071


L T P
0 0 8
Credit – 04, Time – 3 Hrs.

Max. Marks: 100
Distributions of Marks:
Lab Work Test: 60
Record on Lab Work: 20
Viva-Voce: 20
(1 exercise)
(3 exercise)
(1 exercise)

1. Georeferencing of Toposheet/Map.
2. Entry of spatial data (point, line, polygon)
3. Entry of non-spatial data.
4. Linking of Spatial and Non-spatial data
5. Preparing a layout with legend, grid and scale.
6. Mapping Land Use/ land cover
7. Thematic mapping (Socio-economic data)
 - (i) Choropleth (1 exercise)
 - (ii) Pie (1 exercise)
 - (iii) Circular (1 exercise)
 - (iv) Bar Diagram (1 exercise)
8. Location of GCP and mapping from GPS

Suggested Readings:

1. Burrough, P.A. and McDonnell, R. (1998). Principles of Geographic Information Systems. Oxford University Press, Oxford.
2. Bhatta Basudeb (2014). Remote Sensing and GIS. Oxford University Press, Oxford.
3. Chang, K.T. (2003). Introduction to Geographic Information Systems. Tata McGraw Hill Publications Company, New Delhi.
4. Demers, M. N. (2000). Fundamentals of Geographic Information Systems. John Wiley and Sons, Singapore
5. Heywood I, Cornelius S and Carver S. (2000). An Introduction to Geographical Information Systems, Longman, New York.


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16GEOG406CC
Geography of Water Resources
Exam course Code - 4072

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objectives: The objective of the course is to introduce the students to the concepts of development of earth's finite water resources, its dynamic nature, availability, and management and conservation practices.

Course Outcomes (COs): The course shall make the students understand the issues related to spatial and temporal dimensions of availability, utilization, conservation, management and challenges of water resources.

UNIT-I

1. Definition, nature, scope and importance of Water Resources Geography.
2. Distribution and changing trends in use of water in the world.
3. Status of water resources in India.

UNIT-II

4. Factors affecting demand of water, water demand and supply (Domestic).
5. Estimation of water demand and use in agricultural sector.
6. Groundwater assessment, development and management.
7. Water pricing and its marketing, virtual and footprints of water.

UNIT-III

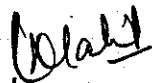
8. Irrigation induced water logging and salinity with reference to Indira Gandhi Canal project.
9. Sources, monitoring and management of water pollution.
10. Interstate water disputes-treaties with reference to India.
11. Water disputes and treaties with reference to India.

UNIT-IV

12. Water harvesting techniques.
13. Watershed management.
14. Issues and challenges of inter basin transfer of water.

Suggested Readings:

1. Aggarwal, A. and Narain, S. 1997. Dying Wisdom: Rise, Fall and Potential of India's Traditional Water Harvesting System. Centre of Science and Environment, New Delhi, 1997.
2. Gurjar R.K. and Jat B.C. 2008. Geography of Water Resources, Rawat Publications, Jaipur.
3. Jones, J.A. 1997. Global Hydrology-Processes, Resources and Environmental Management. Longman.
4. Michael. A.M. 1978. Irrigation: Theory and Practices. Vikas Publishing House Pvt. Ltd., New Delhi.
5. Mather, J.R. 1984. Water Resources Distribution, Use and Management. John Wiley, Marylane.
6. Newson, M. 1992. Land, Water and Development River Basin Systems and their Sustainable Management. Routledge, London.
7. Rao, K.L. 1979. India's Water Wealth. Orient Longman, New Delhi.
8. Tideman, E.M. 1996. Watershed Management; Guidelines for Indian Conditions, Omega, New Delhi.


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GEOG-401OEC
Geography of India
Exam course Code - 4073

L T P
3 1 0

Credit – 4, Time: 3 Hrs.

Total Marks: 100
External Assessment Marks: 80
Internal Assessment Marks: 20

Note: There will be nine questions in all. Question No. 1 is compulsory and consisting 8 subparts (short notes not exceeding 50 words each) covering entire syllabus. There will be 8 long questions, two from each unit. The candidate shall attempt **FOUR** long questions, selecting one from each unit. All questions carry 16 marks each.

Objective: India is a country with diversity in landscape, vegetation, soils, drainage network, economy, population characteristics and culture. It is rich in resources and has got many minerals and power resources, which are the main assets of the country and are also exported. Therefore it becomes immense important to make the students know about their country.

Course Outcomes (COs): After studying Geography of India, students will become aware about the country's beautiful and diverse landscapes. They will acquire knowledge about the economy and valuable resources. This would also sharpen their understanding about the unity in diversity in India.

UNIT-I

1. Physiography: Relief characteristics and physiographical divisions
2. Drainage systems and their functional significance.

UNIT-II

3. Climate: characteristics, seasons and climatic regions of India as given by Trewartha and R. L. Singh.
4. Soil and vegetation types - their distribution, characteristics and conservation.

UNIT-III

5. Agriculture: Characteristics of Indian agriculture, agricultural development in India and Problems of Indian agriculture
6. Irrigation: Types of irrigation, Major irrigation projects: Bhakra Nangal and Damodar Valley Projects

UNIT-IV

7. Production, distribution, status of use and conservation of following minerals: Iron ore, Mica, Manganese and Bauxite
8. Production, distribution, status of use and conservation of following power resources: Coal, Petroleum, Hydropower
9. Production and distribution of (a) iron and steel (b) Cotton textile and

Suggested Readings:

1. Tiwari, R. C.: Geography of India, Prayag Pustak Bhawan, Allahabad.
2. Bharucha, J.P., 1982: Vegetation of India, Oxford India, Bombay.
3. Dubey, R. N., 1974: Economic Geography of India, Kitab Mahal, Allahabad
4. Hussain Majid (2015): Geography of India, Mc Graw Hill Education.
5. Joshi, H. L., 1990: Industrial Geography of India, Rawat Publications, Jaipur
6. Nag, P. and Sengupta, S., 1992: Geography of India, Concept publications. Co., New Delhi.
7. Rautray, J.K.: Geography of regional disparity, Asian Institute of Technology, Bankok, 1993
8. Singh, R. L.: India: A Regional Geography, N.G.S.I., Varanasi, 1971
9. Sharma, T. C. and Coutinho, O. 1988: Economic and Commercial Geography of India, Vikas Publishing House Pvt. Ltd, New Delhi.
10. Tirtna, R. and Krishan G., 1996: Geography of India, Rawat Publications, Jaipur & New Delhi.

(Signature)
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Bhagat Phool Singh Mahila Vishwavidyalaya

Khanpur Kalan, Sonapat, Haryana-131305

DEPARTMENT OF GEOGRAPHY

ORDINANCE

MASTER OF SCIENCE GEOGRAPHY

(w. e. f. July 2024-2025)

1. Definitions

- 1.1. **Programme** stands for M.Sc. (Geography).
- 1.2. **Credit** is the weightage assigned to a paper in terms of contact hours.
- 1.3. **Grade** stands for a letter grade assigned to a student on the basis of evaluation of a paper on the 10 point scale.
- 1.4. **Grade point** stands for the numerical equivalent of the letter grade.

2. Duration

The duration of the Programme for M.Sc.(Geography) shall be **Two years** comprising four semesters. Each Semester shall be of 90 working days. However, all the candidates will be required to complete the Programme within a maximum period of **four years**.

3. Admission

3.1. **Eligibility** : A candidate shall be eligible for admission to M.Sc.(Geography) Programme if she has passed the B.A. with Geography or B.Sc. Geography or B.A. Geography (Hons.) examination with Geography as one of the subject with 50% marks in aggregate from a recognized university or as prescribed by Haryana State education department. In case of SC/ST/Persons with Disabilities, categories, the candidate shall be given 5% relaxation.

No candidate who is in employment (full time/part time/Honorary Service) will be eligible to take admission in the programme without taking leave from her institution/office from the date of admission to termination of the final semester examination including other essential requirements. She has to submit an affidavit in this regard. If at any stage it is found that she has violated this rule, her admission shall stand cancelled.

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3.2. **Procedure:** Admissions will be on the basis of merit/ entrance test or any other criterion adopted by B.P.S. Mahila Vishwavidyalaya from time to time. The last date for the receipt of the admission forms shall be notified by the University.

4. Fee

The Programme fee shall be paid by the candidate as prescribed by the University from time to time.

5. Teaching Methodology

The Methodology shall include Classroom teaching, Assignments, Viva-voce, Practical Work, Seminar, Workshop, Project Work, Quiz, Group Discussion etc.

6. Credit Weightage

Each Paper has a certain number of credits which describe its weightage. Credits of a paper are evaluated as under:-

- 6.1 **Lecture Teaching:** One credit per lecture per week per semester will generally be adopted.
- 6.2 **Tutorial:** One credit per tutorial hour per week per semester will be adopted.
- 6.3 **Minor Project/Seminar/ Colloquium/Group Discussion/ Assignment/Case Study:** Half credit each.
- 6.4 **Practical Teaching:** Half credit per lecture per week per semester will generally be adopted.

7. Examination

- 7.1 At the end of the each semester, there shall be an examination where each candidate shall be examined in the papers studied by her in that semester. Each semester examination shall be designated as first semester examination, second semester examination, third semester examination and so on.
- 7.2 The examination in each semester will be held according to the syllabi approved by the Post Graduate Board of Studies. The Board of examiners shall be appointed for each paper and shall be recommended by the Post Graduate Board of Studies.
- 7.3 The examination shall consist of theory papers and practical examination. Theory papers are to be set by the internal/external paper setters appointed by the Vice-Chancellor from a panel of examiners submitted by the Chairman of the department duly approved by the BOS of the concerned department.
- 7.4 For practical examination viva-voce shall be conducted jointly by the external and internal examiners. If an external examiner is not able to join, alternate examiner

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(including those of the same University dept.) may be appointed by the Chairperson of the concerned dept. with the intimation to the Controller of Examinations in the following preferential order:

i) From outside

ii) From BPSMV, Khanpur Kalan.

- 7.5 The examination for all odd semesters will normally be held in November/December and for the even semesters in April/May on such dates as provided by the University. The concerned teacher/paper coordinator should ensure that 100% syllabus is covered in each subject before the semester examination.
- 7.6 Every paper is coordinated by a member of the teaching staff of the department which is offering the paper in a given semester. This faculty member is called the paper coordinator. He/ She has the full responsibility for conducting the paper, coordinating the work of the other members of the faculty involved in the paper, holding the minor test and assignments. For any difficulty, the student is expected to approach the paper coordinator for advice and clarification. All the responsibilities from teaching to the award of final grade will be of the paper-coordinator.
- 7.7 Every student has to appear in the minor test. If a student does not take a minor test, she shall be awarded zero marks in the test. The marks obtained in sessional/practical/theory/drawing/general proficiency are to be submitted to the examination branch duly signed by the Chairperson of the department before the close of semester examination. The examination branch shall convert the marks in to equivalent grades as per the grading procedure.
- 7.8 If a candidate after attending the classes for the paper of studies in the department, either not appeared or having appeared in any semester examination and failed in one or more papers for that examination, she can appear for such papers as a re-appear student as per university rules.
- 7.9 For holding the Minor Tests during even and odd semester the schedule of minor exam shall be laid down by teacher(s) concerned in consultation with the Chairperson of the Department as the case may be and shall be made known to the students at the commencement of each semester. For each semester there will be two minor exams and both will be compulsory.
- 7.10 For Minor Test, the syllabus for Examination will be what is covered in particular term. The Major Test (EXTERNAL EXAM) will be based on the entire syllabus.

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Every teacher will submit in writing to the Chairperson at the end of term i.e. intervening period between Minor Tests and Major Test, the content of the syllabus covered during the term.

- 7.11 After finalization of the marks of internal assessment, the same shall be displayed on the department notice board for the information of the students. Students, who have a specific grievance against the marks awarded to her, may discuss the same with the concerned Paper Co-ordinator, who after consideration of the grievances of all the students shall finalize the marks to be awarded for the paper
- 7.12 The awards of all internal assessments shall be sent to the examination branch within seven days of last day of the classes for that semester.

8. Re-appear

The candidates may take re-appear examinations as per the following guidelines:

Semester	When to appear
I st	Along with Regular I st Semester
II nd	Along with Regular II nd Semester
III rd	Along with Regular III rd Semester or IV th semester
IV th	Along with Regular IV th Semester or immediate Semester

09. Evaluation and Grading

9.1. The assessment will be 20 % Internal and 80% External.

9.2. The minimum passing marks/grade for passing any semester Examination shall be:

9.2 (a). 40% in external examination and 40% in the aggregate of internal and external. In case a student fails to acquire 40% in the aggregate of the internal and external, she will be awarded re-appear in the theory (external) paper of that subject. There will be no re-appear in the internal assessment. The marks obtained in the internal assessment of a subject shall be carry forwarded, if a student gets re-appear in the external examination.


9.2 (b) 40% in each practical Examination/Viva-Voice Examination.

9.3 The weightage for internal evaluation is as follows:

9.3.1. Class tests/minor test/sessional tests 10% i.e. 10 marks out of 100

9.3.2. Assignments/Presentations/Seminars/Group Discussions 5% i.e. 5 marks out of 100

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9.3.3. Attendance 5% i.e. 5 marks out of 100.

Less than 75% 0 marks

75% and above & Less than 80% 3 marks

80% and above & Less than 85 % 4 marks

85% and above 5 marks

10. Adhoc Grace:

If there is any discrepancy/ out of syllabus/ printing error/ untoward incident during the examination, the matter be referred to a Standing Committee of

- (i) Controller of Examinations.
- (ii) HOD of the concerned Department.
- (iii) One faculty member concerning the subject.

The Committee may recommend re-conduct of the paper or uniform grace marks to all but that should not exceed 10% marks of that particular paper.

11. Moderation of Marks:

(a) Internal Examinations:- If there are more than one teacher associated in any internal assessment, one of the member be made co-coordinator by the concerned HOD and he along with the others can moderate the marks to maintain uniformity so that no student get undue advantage or disadvantage. It can be done by fixing criteria beforehand..

(b) External examinations: if there is unusual variation (very high or very low) in the awards, the COE may refer the matter to a Moderation Committee consisting of

- (i) Controller of Examinations
- (ii) HOD of the concerned Department
- (iii) One faculty member concerning the subject.

As per recommendation of the committee the result may be revised.

12. Grading:

The academic performance of a student shall be graded on a ten point scale as prescribed by University Grants Commission.

Academic Performance	Letter Grades	Grade Points (G)
Outstanding	O	10
Excellent	A+	09
Very Good	A	08
Good	B+	07
Above average	B	06
Average	C	05
Pass	P	04
Fail	F	00
Absent	Ab	00


Note: 1. Pass Grade is Grade 'C' and above.

2. Grades 'P', and 'F' are fail grades.

The award of grades based upon marks obtained out of 100 shall be made as follows:

<u>Marks</u>		<u>Grade</u>		<u>Marks</u>
90	≤	O	≤	100
80	≤	A+	≤	89
70	≤	A	≤	79
60	≤	B+	≤	69
50	≤	B	≤	59
40	≤	C	≤	49
30	≤	P	≤	39
0	≤	F	≤	29

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13. Calculation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

The Grade Point Average is calculated as follows:-

$$\text{GPA} = \frac{\sum (\text{Number of credits} \times \text{Grade Points})}{\sum (\text{Number of Credits Registered})}$$

For the purpose of calculation of GPA for SGPA and CGPA only those programmes (including projects) will be taken into account in which the student has been awarded one of the pass grades. Here S stands for the sum of

$$(i) \text{ SGPA} = \frac{\sum C_i P_i}{\sum C_i}$$

Where

C_i = Number of credits earned in the i^{th} programme of a semester for which SGPA is to be calculated.

P_i = Grade point earned in i^{th} programme

$I = 1, 2, 3, \dots, n$, represent the number of programmes in which a student is registered in the concerned semester.

$$(ii) \text{ CGPA} = \frac{\sum C_j P_j}{\sum C_j}$$

Where

C_j = Number of credits earned in the j^{th} programme up to the semester for which CGPA is to be calculated.


P_j = Grade point earned in the j^{th} programme. Any grade lower than the pass grade in a programme shall not be taken into account.

$j = 1, 2, 3, \dots, n$, represent the number of programmes in which student was registered and obtained a grade not lower than 'C' upto the semester for which CGPA is to be calculated.

14. Attendance

14.1 No candidate shall be considered to have pursued a regular programme of the study unless she has attended not less than 75% of the lectures in each paper/seminar case discussion, field trips, tutorials etc. This requirement shall be fulfilled separately for each paper of study. A

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Department of Geography
B.P.S.M.V. Khanpur Kalz (pat)

deficiency up to 10% may be condoned by the Chairperson of the Department and a further 5% by the Vice-chancellor.

14.2 If a student remains absent from the Department for more than four weeks without intimating the Chairperson/In-charge of the Department, her name will be removed from the Department rolls with information to the Academic Branch of the university.

14.3 In case the student's name is struck off due to non-payment of fee and is re-admitted later, her attendance shall not be counted for that period.

15. Scholarships:

A candidate while appearing in the re-appear examination shall not be eligible for a scholarship, a prize or a medal.

16. Improvement Case:

(i) A person who has qualified for the award of M.Sc Geography from this university may be allowed to re-appear as an ex-student in at the most two subjects in which she appeared earlier, with a view to improve her previous performance. The candidate shall be awarded only two consecutive chances along with the re-appear students in the subject(s) concern immediately after her passing for her degree.

(ii) No candidate shall be eligible for improvement after one year of passing the examination for the degree course.

(iii) The candidate will have to deposit fee and form for each examination separately.

(iv) The higher score in the subject(s) in which she re-appears for improvement will be taken in to account towards the final result and the marks already obtained by the candidate in the subjects in which she has not opted to improve her result shall be carried forward. The candidate shall be awarded a new DMC clearly mentioning 'Improvement Case' subject(s) with improved marks, only and the new grand total.

(v) In case the candidate does not improve her result, it shall be declared as 'Previous Result Stands.'

17. Division:

The successful candidates shall be classified in three divisions as under:

- (i) Those who obtained 60% or more of the aggregate number of marks in all the subject in all semester mention total semesters of that course taken together shall be placed in First division.

- (ii) Those who obtain less than 60% but not less than 50 % of the aggregate number of marks in all subjects in all semesters taken together shall be placed in the second Division.
- (iii) Those who obtain below 50 % and not less than 40 % of the aggregate number of marks in all subjects in all semesters taken together shall be placed in the third Division.

18. General Guidelines:

18.1 Where this document is silent about any rule, the University policy regulation as framed from time to time will be applicable.

18.2 Admission, teaching schedule, preparatory holidays, examination, winter, summer vacation, shall be followed as specified in academic calendar of the University.

18.3. A student is deemed to have completed the requirements for the degree and is eligible for the award of degree if:

- a. She has satisfied all the academic requirements as per the regulations; and
- b. She has paid all fees due from her; and
- c. There is no case of indiscipline pending against her.
- d. Satisfied the minimum academic and residence requirements;
- e. Satisfactorily completed the requirements for the short duration across-curricular paper, industry internship and NCC/NSS as may be prescribed by the Academic Council;

18.4 A student who has completed all the requirements listed above shall be eligible for award of degree/ certificate. However, under extremely exceptional circumstances, where gross violation of the requirements is detected at any later stage, the Academic Council may recommend to the Executive Council to withdraw the degree already awarded.

18.5. The gap of one/two semesters missed by the student(s), as the case may be, will count towards the total duration of the programme permissible under the regulations.

18.6 Absence of registered students from classes during a semester shall be discouraged. However, for bonafide reasons such as illness, maternity a student may be granted leave of absence as per provision of leave rules for students framed by the University.

18.7 All academic problems of the students other than those affecting the University rules and regulations framed from time to time may be looked into by a committee constituted by the Dean of the faculty.

19. **Grace Marks:** Grace Marks shall be provided as per university rules.

20. Promotion:

20.1 A student will be eligible for promotion to the second, third and fourth semester(s) who:-

20.1.1 Has been on the rolls of the Institute during the semester preceding the respective semester examination; and

20.1.2 Has attended not less than 75 % of lectures in the respective semester; and

20.1.3 Has passed at least 50 % of the papers in the preceding year examinations.

20.1.4 Failing which she shall be declared as FAIL in that semester and she shall be required to appear in the failed semester in all the papers currently in force as a private candidate (as ex-student).