Total number of printed pages – 20

14 (Sem–3) GGY–3156

2025

GEOGRAPHY

Paper : GGY–3156

(Theoretical and Methodological Framework of Social Geography)

Full Marks : 80

Time : Three hours

The figures in the margin indicate full marks for the questions.

Unit–I

(Marks : 48)

Answer ***any three*** questions.

1. Define Social Geography. Discuss its relationship with Sociology and trace its development in Anglo–American countries. 4+4+8=16

2. Trace the evolution of societies and discuss the role of culture in shaping the social world. How do material and non–material components of culture influence social policy and cultural change ? 8+8=16

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3. Explain the conceptual basis of social well–being. Discuss its components. How do indicators like literacy, education and health care reflect the quality of life in different societies ? 4+4+8=16

4. What do you understand by social group approach ? Discuss its different types with necessary examples. Briefly focus on the significance of social group approach in social geography. 8+8=16

5. Analyze how social structure is manifested through caste, class, religion and ethnicity in India with necessary illustrations. 16

Unit–II

(Marks : 32)

Answer ***any four*** questions :

6. Discuss the concept of social plurality and diversity in India. How do these aspects contribute to both social harmony and social tension within the country ? 4+4=8

7. What do you understand by Spatial Diffusion ? What are its various types ? Explain with appropriate examples. 3+2+3=8

8. Discuss social pattern and social process drawing examples from North–East India. 8

9. Define social space. Briefly discuss the various types of space used in social geography with necessary examples. 8

10. Explain the concept of social organization. Discuss its key components and how social organization helps in maintaining social order and cooperation within a society. 8

11. Write a brief note on : ***(any two)*** 4×2=8

    (a) Cultural Change

    (b) Development of Social Geography in India

    (c) Social policy

Paper : GGY–3156

(Fluvial Geomorphology)

GROUP–1

Answer question ***no. 1*** *and* ***any three*** *from the rest.*

Q. No.	Question	Marks	CO Mapping	Blooms taxonomy level
1.	Discuss the contribution of fluvial geomorphologist from the period 1940 to 2000 in the evolution of the subject.	16	CO1	Understand
	Or			
	Discuss the meaning, scope and evolution of fluvial geomorphology.	16	CO1	Understand
2.	Interpret how the changing methods in Geomorphology have helped in developing the scope of the subject.	8	CO2	Apply
3.	Using drainage basin parameters, apply the concept of input-output analysis to assess basin hydrology.	8		Apply

Q. No.	Question	Marks	CO Mapp	Blooms taxonomy level
4.	Evaluate the concept of channel equilibrium and discuss how graded streams maintain balance between erosion and deposition.	8	CO3/ CO4	Evaluate
5.	analyze the factors influencing runoff generation in a tropical monsoon basin like the Brahmaputra.	8	CO3–	Analyze
6.	Write short notes : ***(any two)***	4×2	CO1	Apply
	(a) Meander Geometry	4	CO3	Understand
	(b) DEM	4	CO2	Understand
	(c) Hydrograph	4	CO3	Understand
	GROUP–2 *Answer question* ***no. 7*** *and* ***any three*** *from the rest.*			
7.	Assess the extent and nature of channel changes in the Brahmaputra and its tributaries using available geomorphic evidence.	16	CO4	Evaluate

Q. No.	Question	Marks	CO Mapp	Blooms taxonomy level
	Or			
	Interpret the process of the genesis of floodplains and with suitable examples from the Branmaputra floodplan. Draw appropriate diagram wherever ncecessary.	16	CO5	Crate/ Synthesise
8	Differentiate between straight, meandering, and braided channel patterns, emphasizing their controlling variable and sediment characteristics.	8	CO4	Analyze
9.	Design a conceptual model illustrating floodplain formation and the associated depositional processes in a large alluvial river system.	8	CO5	Create/ Synthesise
10.	Summarise the characteristics of braiding rivers. Where do we found these characteristics reflected in the Brahmaputra River.	8	CO4	Evaluate

Q. No.	Question	Marks	CO Mapp	Blooms taxonomy
11.	Discuss the channel types and their associated morphological characteristics.	8	CO4	Analyze
12.	Write short notes : ***(any two)***	4×2		
	(a) point bar and scroll bar	4	CO5	Understand
	(b) plan geometry	4	CO4	Understand
	(c) Cut-off channels.	4	CO4	Understand

Paper : GGY–3156

(Geoinformatics)

Unit – I

(Remote Sensing)

Answer Question ***No. 1*** *and* ***any two*** *from the rest.*

1. Define Remote Sensing. Explain in detail the fundamental components of a remote sensing system and describe the basic principles involved in data acquisition. 4+6+6=16

Or

Discuss the electromagnetic spectrum in the context of remote sensing. Illustrate how different regions of the EM spectrum are utilized in aerial and satellite remote sensing applications. 6+10=16

2. Analyze how tilt and relief displacement affect the geometric accuracy of aerial photographs. Support your answer with diagrams. 8

3. Describe satellite data products provided by NASA/USGS (USA), and ISRO (India), highlighting their key characteristics and applications. 8

4. Write short notes on ***any two*** of the following : 4×2=8

   (a) UTM Zones and Coordinate System

   (b) Spectral and Radiometric Characteristics of Aerial Photography

   (c) Sensors and Platforms

Unit – II

(Geographical Information System)

Answer Question ***No. 5*** *and* ***any two*** *from the rest.*

5. Explain the major components of GIS. Discuss how these components work together to support spatial data management and analysis. 6+10=16

Or

Discuss the various spatial data structures used in GIS and mention their advantages and disadvantages. 8+4+4=16

6. Explain the process of formulating database queries. Illustrate your answer using an example of a hypothetical database. 8

7. Illustrate how raster and vector datasets can be utilized together in GIS to perform a comprehensive environmental assessment, citing one local example. 8

8. Describe the process of integrating remote sensing imagery with GIS datasets. Provide suitable examples. 8

Unit–III

(Global Positioning System)

*Answer **any two** of the following :*

9. Discuss the major sources of GPS errors and explain how Differential GPS (DGPS) improves positional accuracy. 8

10. Analyze the role of GPS in disaster management by discussing how GPS supports early warning systems. 8

11. Discuss how drones and microsatellites are used in smart agriculture for tasks such as crop health monitoring, yield estimation, and precision farming. 8

Paper : GGY–3156(6)

(Population Geography)

GROUP–A

(Marks : 48)

Answer ***any three*** of the following questions : 16×3=48

1. Define population geography and explain its nature and major approaches. Analyse how it is related to the discipline of Demography. 10+6=16

2. Describe the main propositions of the Malthusian Theory of population growth. Critically evaluate its relevance in contemporary global demographic scenarios. 8+8=16

3. What is meant by migration ? Identify the major push and pull factors governing migration and examine the global consequences of large–scale migration movements. 2+4+10=16

4. Explain the concept of the population–resource relationship. Using Ackerman's classification, delineate the population–resource regions of the world and describe the key characteristics of each regions. 4+12=16

5. Compare and evaluate the contemporary population policies of the United States and India and assess the demographic and Socio–economic impacts of these policies. 8+8=16

GROUP–B

(Marks : 32)

Answer ***any four*** of the following questions : 8×4=32

6. Discuss the significance of studying population geography in interpreting spatial patterns and demographic processes.

7. Examine the major problems associated with population data with respect to its analysis and mapping.

8. Outline the historical trend of global urbanization and analyse the major regional disparities in urban growth across the world.

9. Discuss the contemporary population policies and demographic programmes of Japan and China.

10. Explain the contributions of Reilly and Zipf to the understanding of human migration flows between places.

11. Write short notes on the following : 4×2=8

(a) Age composition and the demographic issues.

(b) Population projection and its significance.

Paper : GGY3156

(Cartography)

Group – A

Answer ***any three*** of the following : 16×3=48

1. Define cartography and discuss its development, especially in the context of analog and digital cartography. 2+6+4+4=16

2. What do you mean by spherical trigonometry ? With suitable illustrations spherical triangle and spherical excess. Derive the sine formula of a spherical triangle with appropriate illustration. 8+8=16

3. What is Mercator's projection ? Discuss about its construction, properties, uses and limitations. 2+8+6=16

4. What do you mean by map design and layout ? Discuss the elements and components of graphic map design. 4+6+6=16

5. Discuss the basics of triangulation survey. How the issues of vertical and horizontal controller are advened in this survey ? . 6+5+5=16

Group – B

Answer ***any four*** of the following : 8×4=32

6. Discuss the significance of international projection in repeet of its conduction uses and limitation.

7. Discuss the significance of generalization in the map making process and discuss the principles of generalization. 3+5=8

8. With suitable diagram discuss the application of theodolite in Traversing and height determination. 4+4=8

9. Discuss the major map types in respect of their characteristics and applications. 4+4=8

10. Discuss the procedures to be adopted for plane table survey. Discuss the methods of radiation and intersection with suitable diagram. 4+4=8

11. Write short notes on the following. 4×2=8

    (a) Spherical triangle

    (b) Total station

Paper : GGY–3156

(Geography of Rural Development)

Group – A

*Answer **any three** of the following questions.*

1. Discuss the significance and associated processes of rural development. 8+8=16

2. Differentiate the characteristics of rural areas of developed and developing countries. 16

3. Critically examine the Central place theory of hierarchical distribution of settlements proposed by Walter Christaller. 16

4. Write short explanatory notes on ***any two*** of the following : 8×2=16

   (i) Rural-urban relations

   (ii) Inequalities of rural development

   (iii) Characteristics of rural areas of Assam

   (iv) Rural production systems

Group – B

*Answer **any four** of the following :*

5. Discuss briefly the concept of rural development. 8

6. Explain the diffusion process of development. 8

7. Define sustainable rural development and discuss the measures for sustainable rural development. 4+4=8

8. Critically examine the components of rural development. 8

9. Discuss the role of agriculture in uplifting the socio–economic development of rural area. 8

10. Analyse the social and environmental problems of rural development in Assam. 8

Paper : GGY–3156(7)

(Regional Development and Planning)

[Answer ***any three*** questions from Questions ***1*** to ***4*** and ***any four*** from the rest]

1. Examine the concept of a region. What are the axioms you would associate with it? 16

2. Eludicidate Christallers' Die Centralen Orte in Zeduestschland or Perroux's Growth Pole theory. What is the contemporary relevance of either of the theories discussed by you? 8+8=16

3. Examine regionalization and the methods you would entail to rectify its inherent inadequacies. Elucidate which of these would bear the least fruit thereby minimizing the desirable fallouts. 4+12=16

4. What can nations do to manage their resources for regional development sans conservation? Are such actions desirable, albeit even partially? Would such efforts very bear the desired fruits? Examine what constitute such fruits? (15% conceptual/ analytical) 16

5. Answer short notes on ***any two*** of the following : 4×2=8

   (i) What are resource regions ?

   (ii) In decentralization always necessary to expedite development ?

   (iii) What are the commonly used Methods of Regional Analysis ? Who was Greg Chapell ? And did he ever write a treatise called "Methods of Regional Analysis : An Introduction to Regional Science".

6. Elucidate what the concept of town and country planning ? 8

7. Examine the main tenets of the growth foci framework. Who was it propounded by and what is its contemporary relevance ? 8

8. Write short notes on ***any two*** of the following : 4×2=8

   (i) Functional regions and their linkages.

   (ii) Multi–level planning.

   (iii) What are problem regions ?

9. Discuss ***any two*** approaches to regional planning. 8
