



GEOADS01T (Physical Geography)

Category: A (10 Marks)

1. Discuss the internal structure of the Earth with the help of seismic evidence. What is the significance of the Gutenberg discontinuity? (7+3)
2. Explain the influence of granite on landform development. Contrast it with basaltic landforms. (6+4)
3. Describe the endogenetic forces controlling landform development. Mention two exogenetic forces with examples. (7+3)
4. Explain the cycle of erosion under fluvial processes with diagrams. What is river rejuvenation? (7+3)
5. Discuss the nature of earthquakes and floods as hazards in India. Briefly classify hazards into natural and anthropogenic. (6+4)
6. Describe the vertical structure of the atmosphere. Mention two key characteristics of the stratosphere. (7+3)
7. Explain the global pressure belts with a neat diagram. Write a note on the doldrums. (7+3)
8. Describe the origin and characteristics of jet streams. Distinguish between subtropical and polar jet streams. (6+4)
9. Explain the factors influencing soil formation. Mention any two biological factors affecting soil. (7+3)
10. Describe the major horizons of an ideal soil profile. State the importance of humus. (6+4)
11. Define an ecosystem and explain its basic principles. What is meant by “ecotone”? (7+3)
12. Discuss the concept of ecological succession. Differentiate between niche and habitat. (6+4)



13. Describe the climatic and vegetation characteristics of the Tropical rainforest biome. Mention two faunal adaptations found there. (7+3)
14. Compare the Savannah and Temperate grasslands. Write any two economic significances of grasslands. (6+4)
15. Explain the adaptations of plants in desert biomes. Contrast them with adaptations in tundra biomes. (7+3)

Category: B (5 Marks)

16. Write a short note on Mohorovičić discontinuity.
17. Distinguish between granite and basalt.
18. Define endogenetic forces with suitable examples.
19. Distinguish between fluvial erosion and fluvial deposition.
20. Explain any two causes of landslides in India.
21. State the composition of the troposphere.
22. Differentiate between the troposphere and stratosphere.
23. Explain the characteristics of the doldrums.
24. What is the role of the Coriolis force in planetary winds?
25. Explain the concept of the Rossby waves.
26. Describe the role of parent material in soil formation.
27. What are the functions of soil organisms?
28. Explain the O and A horizons in a soil profile.
29. Define the concept of an ecosystem with a suitable example.
30. Write short notes on “ecotone” with an example.
31. Differentiate between niche and habitat.
32. Define and explain the concept of ecological succession.



33. State the main features of the Tropical rainforest biome.
34. Write a short note on the desert biome.
35. Describe the climatic conditions of the Tundra biome.

Category: C (2 Marks)

36. Name the layers of the Earth based on seismic data.
37. What is a dyke?
38. Give two examples of exogenetic processes.
39. What is river rejuvenation?
40. Define natural hazard.
41. What is the height of the troposphere at the equator?
42. Name two permanent gases of the atmosphere.
43. What are trade winds?
44. Define jet stream.
45. Name any two factors of soil formation.
46. What is humus?
47. Define ecosystem in two lines.
48. What is a biome?
49. Give one characteristic of each of the Taiga and Savannah biomes.
50. Name two types of grassland biomes.



GEOADS01P – Physical Geography (Lab)

10 marks each

1. Construct a plain linear scale to measure 2 km, given that 1 cm = 200 m.
2. Construct a plain linear scale to read up to 5 km, when 1 cm = 0.5 km.
3. Draw and interpret an altimetric frequency distribution from given contour data.
4. Represent relief features of a given terrain using an altimetric frequency polygon.
5. Demarcate and explain the major physiographic zones of India using a sketch map.
6. Prepare a physiographic zonation of the given contour map.
7. Identify and classify the drainage pattern from a given Survey of India topographical sheet.
8. Draw and label different types of drainage basins (radial, dendritic, trellis).
9. Construct a wind rose diagram for 8 directions from the given wind frequency data.
10. Construct a wind rose diagram for 16 directions and interpret it.
11. Prepare and interpret a map showing settlement distribution from a given topo sheet.
12. Identify transport attributes (roads, railway, cart track) from a given topo sheet.
13. Draw geomorphic features (valleys, ridges, escarpments) from contour sketches.



14. Identify channel patterns (straight, meandering, braided, anastomosing) from maps.
15. Construct a linear scale to show kilometers and meters for a given map distance.
16. Prepare an altimetric frequency distribution and comment on relief characteristics.
17. Construct a plain scale where 1 cm = 5 km and show a distance of 42 km.
18. Compare and sketch two different drainage patterns from maps.
19. Construct and explain a wind rose diagram for summer and winter seasons separately.
20. Draw a composite diagram showing drainage, settlement, and transport features.

5 marks each

21. Construct a simple linear scale for 1 cm = 2 km.
22. Sketch and explain dendritic drainage.
23. Sketch and explain trellis drainage.
24. Sketch and explain radial drainage.
25. Sketch and explain rectangular drainage.
26. Draw and label a meandering river channel.
27. Draw a braided channel system.
28. Sketch a simple wind rose diagram (4 directions).
29. Interpret a wind rose diagram showing prevailing wind direction.
30. Identify a linear settlement from a topo sheet.
31. Identify a nucleated settlement from a topo sheet.



32. Identify a dispersed settlement from a topo sheet.
33. Mark and explain one physiographic division of India.
34. Represent a transport attribute using mapping symbols.
35. Draw a simple relief sketch using contour lines.

Viva Questions

36. What is a scale? Why is it necessary in maps?
37. Differentiate between plain and comparative scales.
38. Define an altimetric frequency distribution.
39. What information do contour maps provide?
40. What is meant by physiographic zones? Give examples.
41. Define drainage pattern. Name any three types.
42. What is a channel pattern?
43. How do you identify a settlement pattern on a topo sheet?
44. Differentiate between dendritic and trellis drainage.
45. What is a wind rose diagram?
46. Why do we use wind rose diagrams in climatology?
47. Why are exercises in lab notebooks to be drawn in pencil?
48. What is the importance of Survey of India topo sheets in geography?
49. How do transport features influence settlement patterns?
50. What is the difference between geomorphic and physiographic features?