



CBCS SCHEME

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Third Semester B.E. Degree Examination, Dec.2023/Jan.2024 Earth Resources and Engineering

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With a neat sketch, explain the internal structure of the Earth. (08 Marks)
- b. What is Earthquake? Explain the types and causes of Earthquake. (08 Marks)
- c. Write a short note on Tsunami and its causes. (04 Marks)

OR

- 2 a. Write the importance of Geology in the field of Civil Engineering. (08 Marks)
- b. How Landslides are caused? Explain the preventive measures of Landslide. (08 Marks)
- c. Write a note on Cyclone and its causes. (04 Marks)

Module-2

- 3 a. What is Mineral? Explain classification of Minerals with examples. (04 Marks)
- b. Explain physical properties of any two Minerals :
i) Hematite ii) Feldspar iii) Calcite. (06 Marks)
- c. Explain the types of Rocks and write a note on Railway ballast and Decorative stones. (10 Marks)

OR

- 4 a. Explain the properties of any two :
i) Lusture ii) Hardness iii) Cleavage. (06 Marks)
- b. What is an Aquifer? Write the water bearing properties of an Aquifer. (08 Marks)
- c. What are Sedimentary Rocks? Explain the texture of Sedimentary Rocks. (06 Marks)

Module-3

- 5 a. What is Weathering? Explain the types of weathering. (08 Marks)
- b. Explain Soil profile with diagram and write the types of soil. (08 Marks)
- c. Write a note on Artificial recharge of groundwater. (04 Marks)

OR

- 6 a. What is Dam? Explain Geological conditions on Earthen dam , Gravity dam and Arch dam. (06 Marks)
- b. Write a short note on Interlinking of Rivers. (08 Marks)
- c. Write the effects of weathering on monumental rocks. (06 Marks)

Module-4

- 7 a. Three bore hole are sunk at three point of an equilateral triangle of 480m each. Where bore hole P is located West of Q and bore hole R is located North and midpoint of PQ and they reach coal seam at 100m, 220m and 260m depth respectively. Determine
i) The Altitude (Dip and Strike)
ii) At what depth bore hole 'S' reaches sandstone bed if it is located at midpoint of QR.
Scale for triangle – 1 : 100 ; Scale for gradient – 1 in 1 units. (10 Marks)

- b. With a neat diagram, explain Electrical resistivity method by using Wenner and Schlumberger method. (10 Marks)

OR

- 8 a. A limestone bed dips 25° East and it has width of 160m. Determine true thickness and vertical thickness. (Scale – 1 : 100). (04 Marks)
b. What are Faults? Explain types of Faults. (08 Marks)
c. What are Folds? Explain types of Folds. (08 Marks)

Module-5

- 9 a. Explain applications and uses of Remote sensing and GIS. (10 Marks)
b. Explain GPS , GPR and Drone applications in Civil Engineering. (10 Marks)

OR

- 10 a. What is Photogrammetry and write the applications of Photogrammetry. (10 Marks)
b. Write a short note on:
i) Toposheet ii) Flight Planning iii) Scale. (10 Marks)
