Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 50332

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Third/Fifth Semester

Civil Engineering

CE 8392 — ENGINEERING GEOLOGY

(Common to Environmental Engineering)

(Regulations 2017)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is the difference between physical weathering and chemical weathering?
2. What are alluvial fans and alluvial cones?
3. Enlist any four feldspar group of minerals.
4. What is cleavage? Give any one example.
5. What is contact metamorphism? Give any one example.
6. What are hypabyssal rocks? Give any one example.
7. Draw a neat sketch of normal fault and indicate the parts.
8. What is the difference between seismic reflection and seismic refraction?
9. List any four coastal protection structures.
10. What is arch dam? Mention one important arch dam in south India.

PART B — (5 × 13 = 65 marks)

11. (a) Explain the important erosional and depositional features and landform of wind.

Or

(b) Give a detailed account on role of groundwater in civil engineering constructions.

12. (a) Discuss in detail about physical properties and industrial uses of Muscovite and Calcite.

Or

(b) Discuss in detail about physical properties and industrial uses of Gypsum and Clay.

13. (a) Write the properties, formation, occurrence and uses of Basalt, Gneiss and Limestone.

Or

(b) How will you assess the important engineering properties of rocks in the field? Explain with neat sketches.

14. (a) How will you conduct Schlumberger method of electrical resistivity survey for subsurface studies?

Or

(b) Explain the different types of folds with neat sketches and mention their importance in Civil Engineering projects.

15. (a) Give a detailed account on geological conditions necessary for the construction of tunnels.

Or

(b) Explain the various causes and mitigation measures of landslides.

PART C — (1 × 15 = 15 marks)

16. (a) Geological maps are very much useful for various Civil Engineering constructions justify this statement with one or two case studies.

Or

(b) Explain the applications of remote sensing in Civil Engineering with two case studies.

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