

Reg. No. :

Question Paper Code : 90319

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

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 aquifer and aquiclude?
2. What is the difference between focus and epicenter of an earthquake?
3. Write any four industrial applications of mica.
4. Write the Mohs scale of hardness.
5. How does breccia differ from conglomerate?
6. How will you classify the igneous rocks based on depth of occurrence? Give examples.
7. What is the difference between true dip and apparent dip?
8. Draw the electrode arrangement in Wenner method of electrical resistivity survey.
9. What is overbreak in tunneling?
10. What is the difference between active remote sensing and passive remote sensing?

PART B — (5 × 13 = 65 marks)

11. (a) How will you classify the rocks based on intensity of weathering? Explain

Or

- (b) Explain the important erosional and depositional features and landforms of river.

12. (a) Give a detailed account on physical properties and uses of quartz group of minerals.

Or

- (b) Give a detailed account on physical properties and uses of feldspar group of minerals.

13. (a) How will you determine the common engineering properties of rocks in the laboratory? Explain with neat sketches.

Or

- (b) Write the properties, formation and uses of Granite, Marble and Sandstone.

14. (a) Explain different types of faults with neat sketches.

Or

- (b) Explain different types of joints with neat sketches.

15. (a) Discuss in detail about various coastal protection structures with neat sketches.

Or

- (b) Explain the geological conditions necessary for the construction of dams.

PART C — (1 × 15 = 15 marks)

16. (a) How will you apply remote sensing techniques to identify landslide prone areas and to mitigate landslides? Give your answer with neat sketches.

Or

- (b) How will you conduct seismic refraction survey for subsurface investigations? Explain with neat sketches.