

Reg. No. :

Question Paper Code : 20321

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 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. Write about the scale of weathering.
2. List the seismic zones in India.
3. What are the properties of Augite?
4. Give the physical properties of Gypsum.
5. Write the engineering properties of Basalt.
6. List the uses of shale.
7. Mention the types of geophysical methods.
8. Define fault and fold.
9. Write the application of remote sensing in Civil Engineering.
10. Write any two geological conditions for the construction of Tunnels.

PART B — (5 × 13 = 65 marks)

11. (a) Explain in detail about the structure and composition of the earth with neat sketch.

Or

- (b) Describe the plate tectonics with neat sketch.

12. (a) Discuss in detail the uses and the physical properties of pyroxene and hypersthene.

Or

- (b) Explain the uses and the physical properties of calcite and gypsum.

13. (a) Compare and contrast the Engineering properties of granite and dolerite.

Or

- (b) Discuss in detail about the occurrence and uses of quartzite and marble.

14. (a) Explain the three basic types of folds with neat sketches.

Or

- (b) Explain the seismic method for subsurface investigations.

15. (a) Describe the geological conditions for design and construction of dams.

Or

- (b) Explain the causes and mitigation of landslides.

PART C — (1 × 15 = 15 marks)

16. (a) Explain the joints and its types in structural geological conditions with neat sketches.

Or

- (b) Compare the properties of igneous, sedimentary and metamorphic rocks.