

Reg. No. :

Question Paper Code : 80072

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Third Semester

Civil Engineering

CE 8392 — ENGINEERING GEOLOGY

(Regulation 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Draw neat sketch and show the internal structure of the earth.
2. Distinguish – Stalagmites and stalactites.
3. Define: Mineral with few examples.
4. Write the uses of Gypsum in Civil engineering.
5. What are quasi elastic rocks? Give example.
6. How does a slate form?
7. Draw a sketch and show Joint sets and Joint system.
8. What are passive geophysical techniques?
9. List the photo recognition elements in Remote Sensing technique.
10. Relate the angle of repose with landslides.

PART B — (5 × 13 = 65 marks)

11. (a) Explain on erosional and depositional landforms produced by river and its significance in Civil Engineering.

Or

- (b) Discuss in detail on physical and chemical weathering of rocks, its effects and relate to soil profile.

12. (a) Enumerate with neat sketches on the important physical properties of minerals which are essential for identification.

Or

- (b) Write in detail on the following minerals:

- (i) Feldspars
- (ii) Quartz
- (iii) Calcite and
- (iv) Hornblende.

13. (a) Explain on the classification of igneous rocks, their engineering properties and their uses in Civil Engineering.

Or

- (b) Describe the following rocks:

- (i) Sandstone
- (ii) Marble
- (iii) Slate and
- (iv) Dolerite.

14. (a) Discuss on Faults, their types and their effects on Civil Engineering structures.

Or

- (b) Explain electrical resistivity methods and their applications in Civil Engineering.

15. (a) Describe the importance of geological investigations and the effects of geology on Dams.

Or

- (b) How remote sensing is done? Elaborate on the applications of Remote Sensing in the field of Civil Engineering.

PART C — (1 × 15 = 15 marks)

16. (a) "The success or failure of an engineering project depends largely upon the physical conditions with in the province of geology"- Professor Boyd Dawkins.

Justify the above sentence by illustrating the importance of subsurface geophysical investigations prior to major Civil Engineering constructions.

Or

- (b) Every landslide starts with a few pebbles moving in the same direction- Robin Lings.

Relate the above quote and explain the importance of knowledge of geology in landslide mitigation and management.