

Question Paper Code : 50034

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2024.

Sixth Semester

Civil Engineering

AG 3601 – ENGINEERING GEOLOGY

(Regulations 2021)

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Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Spheroidal weathering.
2. Differentiate between focus and epicenter.
3. List the uses of Biotite.
4. Give the engineering properties of granite.
5. Write brief note on attitude of beds.
6. Differentiate between Horst and Graben.
7. What is Remote sensing?
8. List the uses of geological map.
9. Write the causes of tsunami.
10. State land subsidence.

PART B — (5 × 13 = 65 marks)

11. (a) Classify the internal structures of the earth and its composition.

Or

- (b) Discuss in detail about the movement and role of ground water in the civil engineering constructions.

12. (a) Describe the various physical properties of the minerals with suitable examples.

Or

- (b) Elucidate the physical properties, chemical composition and uses of feldspar family of minerals.

13. (a) Describe with the help of neat sketches, the various parts of fold and its types.

Or

- (b) Discuss in detail about the geological strength index and its importance.

14. (a) Explain in detail the working principles of ground penetrating radar (GPR) and its applications.

Or

- (b) Give an elaborate account on geophysical investigation of electrical resistivity method. And how to identify the subsurface stratum?

15. (a) Discuss the various causes, classification and mitigation of landslides.

Or

- (b) Describe the geological investigation pertaining to the construction of tunnels.

PART C — (1 × 15 = 15 marks)

16. (a) Critically analyse and give the suitable geological investigation for a selection of site in the design and construction of Dams.

Or

- (b) Describe with the help of neat sketches, the various type of Fault and its engineering considerations in the field of construction.