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Question Paper Code : T3005

B.E./B.Tech.> DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009

Third Semester

Civil Engineering

AG 2211 — APPLIED GEOLOGY

(Regulation 2008)

Time : Three hours

Maximum : 100 Marks

Answer ALL Questions

Use neat sketches wherever necessary

PART A — (10 × 2 = 20 Marks)

1. Give a brief account of the Earth's interior.
2. What are the effects of weathering on the engineering properties of rocks?
3. Write the chemical composition, physical properties and uses of Calcite.
4. List the properties of petroleum bearing reservoir rocks.
5. Write about the mineral composition, origin and properties and uses of basalt.
6. Bring out the differences between dolerite and pegmatite.
7. Briefly describe Dip and Strike of rocks use a neat diagram.
8. What is the difference between the Wenner and Schlumberger methods?
9. Define the terms 'overlap' and 'parallax'.
10. Give the functions of a breakwater.

PART B — (5 × 16 = 80 Marks)

11. (a) Explain the work of a river and describe the various erosional and depositional landforms created by a river.

Or

- (b) How are earthquakes caused? Give an account of the earthquake belts in India.

12. (a) Give a detailed account of the chemical composition, physical properties, origin, occurrence, engineering behaviour and uses of the clay minerals.

Or

- (b) Describe the varieties, composition, properties, origin & Indian occurrences of coal.

13. (a) Describe the mineral composition, texture, origin, engineering properties and uses of Granite, Limestone, Quartzite and Schist.

Or

- (b) List the various laboratory and field tests to be carried out to determine the engineering properties of rocks.

14. (a) Classify folds and faults in rocks and explain how they influence the design of dams.

Or

- (b) Write an elaborate account of the seismic methods of investigation in civil engineering.

15. (a) Classify aerial photographs and explain in detail their role in civil engineering surveys.

Or

- (b) Give a detailed account of the types of landslides, the causative factors and the methods to prevent landslides.