M 2004

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2006.

Third Semester

Civil Engineering

AG 1201 — APPLIED GEOLOGY

(Regulation 2004)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Name the earthquake belts of India.

2. Define weathering. Name the different types of weathering.

3. Write the elements of symmetry of normal class of isometric system.

4. Differentiate between fracture and cleavage.

5. Write a short note on dolerite.

6. Explain colour index in rocks with examples.

7. What is meant by Metasomatic ore deposit?

8. Define porosity and permeability of rocks.

9. Name the different types of aerial photographs.

10. List the different measures that are used to protect structures from land slides.

PART B — (5 × 16 = 80 marks)

11. (i) Explain the various geological investigations for tunneling and the methods of tunnel excavation in rocks. (10)

(ii) Write a short note on the various problems, faced during tunnel construction. (6)

12. (a) Give a detailed account of the work of sea and the significance of coastal engineering.

Or

(b) Explain the occurrence and movement of ground water and its importance in civil engineering.

13. (a) Give a detailed account of the types, processes of formation and behaviors of clay minerals.

Or

(b) Describe the origin and occurrence of petroleum in India.

14. (a) What are faults? Describe the various types of faults and discuss their significance in the location of dams, reservoirs and large buildings.

Or

(b) Explain in detail, the seismic methods used in the civil engineering investigations.

15. (a) Give a detailed account on rock strength and other the engineering properties to be tested while selecting a rock for construction.

Or

(b) What are photo-interpretation elements? List them and explain the role of aerial photographs in locating suitable sites for civil engineering projects.

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