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Question Paper Code : 51038

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2014.

Third Semester

Civil Engineering

AG 2211/CE 1201/AG 33/080100009/10111 CE 303 — APPLIED GEOLOGY

(Regulation 2008/2010)

Maximum : 100 marks

Time : Three hours

Use neat sketches wherever necessary.

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is Base level of erosion?
2. What is an aquifer?
3. List the properties of mica.
4. Distinguish between Augite and Hornblende.
5. How are metamorphic rocks formed?
6. How are sedimentary rocks identified in the field?
7. Define strike and Dip of a sedimentary formation.
8. List a few applications of Geophysical surveys.
9. What is Landslide?
10. What is the common shape of tunnels in rocks?

PART B — (5 × 16 = 80 marks)

11. (a) Discuss the landforms produced by erosion and deposition of rivers.

Or

- (b) Explain with a neat diagram the interior of the Earth.

12. (a) Describe the classification and physical properties of Quartz family.

Or

- (b) Describe the physical and engineering properties of clay minerals.

13. (a) Describe the mode of formation classifications and structures of sedimentary rocks.

Or

- (b) Describe the petrological and engineering properties of following rocks.

- (i) Granite
- (ii) Limestone
- (iii) Gneiss
- (iv) Conglomerate.

14. (a) Describe with neat diagram the various classifications of faults. Add a note on civil engineering significance of faults.

Or

- (b) Explain the seismic refraction survey for the determination of the depth to bed rock.

15. (a) Discuss on the causes, classifications and prevention of landslides.

Or

- (b) Discuss on the geological conditions essential for tunnel construction.