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Question Paper Code : 21038

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2013.

Third Semester

Civil Engineering

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

(Common to Geoinformatics Engineering)

(Regulation 2008 / 2010)

Time : Three hours

Maximum : 100 marks

Use neat sketches wherever necessary.

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Mohorovicic and Gutenberg discontinuity.
2. What is spheroidal weathering?
3. What are enantiomorphous form of crystals?
4. What are mineralizers?
5. What are phenocrysts in an igneous rock?
6. What is an isograd in a metamorphic rock?
7. What is a hinge point of a fold?
8. What is an equipotential method in geophysical investigation?
9. What is a mosaic?
10. Define flowage.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Describe the theory of plate tectonics. (6)
- (ii) Write a note on the physical and chemical weathering processes. (10)

Or

- (b) Write an essay on the erosional and depositional features of wind. (16)

12. (a) (i) Write a note on symmetry elements of a crystal (4)
(ii) Give the axial relationship of the six crystallographic systems with an example for each one. (4)
(iii) Briefly describe the feldspar group of minerals. (8)

Or

- (b) Write an essay on the processes of ore formation. (16)

13. (a) (i) Write a note on chemical and mineralogical classification of igneous rocks. (4)
(ii) Summarize the structure of sedimentary rocks. (8)
(iii) Write a note on the kinds of metamorphism. (4)

Or

- (b) Describe the structure and textures of igneous rocks. (16)

14. (a) (i) Write a note on attitude of beds. (4)
(ii) Describe the parts of a fold. (4)
(iii) Briefly describe the engineering considerations on joints during construction. (8)

Or

- (b) Describe the classification of folds. (16)

15. (a) (i) Describe how remote sensing is utilized for civil engineering projects. (8)
(ii) Describe the geological conditions necessary for the construction of dams. (8)

Or

- (b) Write a note on causes of landslides. (16)