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**Question Paper Code : 31038**

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

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write the types of waves and currents.
2. What are the methods of wind erosion?
3. Write any four structural forms of minerals.
4. List the minerals formation process.
5. Define Hypabyssal rocks.
6. Write the types of metamorphism.
7. What is an OUTCROP?
8. Write the causes of folding.
9. Define remote sensing.
10. List out the causes of landsliding.

PART B — (5 × 16 = 80 marks)

11. (a) Explain in detail about working of sea with their engineering Importance with neat sketch. (16)

Or

- (b) Write short notes on :

- (i) Groundwater mode of occurrence
- (ii) Earthquake belts in India.

(8)

(8)

12. (a) Discuss about physical properties of minerals with suitable examples. (16)

Or

- (b) Write the Physical properties of following minerals :

- (i) Quartz
- (ii) Garnet
- (iii) Hornblende
- (iv) Mica.

(4 × 4 = 16)

13. (a) Explain the distinction between Igneous, sedimentary and metamorphic rocks. (16)

Or

- (b) Write the engineering properties of following rocks

- (i) Granite
- (ii) Limestone
- (iii) marble
- (iv) Gabbro.

(4 × 4 = 16)

14. (a) Explain in detail about the types of faults and joints with neat sketch.

Or

- (b) Discuss about the seismic and electric method of Geological Investigation. (16)

15. (a) Write a short notes on following :

- (i) Costal erosion and its protection (4)
- (ii) Aerial photography (4)
- (iii) Process of Remote Sensing. (8)

Or

- (b) Explain in detail about Geological condition necessary for construction of Tunnels, bridges and Road cuttings. (16)