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**B.E / B.Tech ( Full Time ) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2014**

**CIVIL ENGINEERING**

THIRD Semester

**AG 8302 ENGINEERING GEOLOGY**

(Regulation 2012)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

**PART-A (10 x 2 = 20 Marks)**

1. How are seismic zones in India classified?
2. Describe the term spheroidal weathering.
3. Write a short note on density of minerals.
4. Give examples of minerals that have flaky or sheet like structure.
5. Give a few examples of metamorphic rocks.
6. Describe the composition, origin and uses of Dolerite.
7. Using a diagram, explain the terms "Dip" and "Strike" of rocks.
8. Differentiate between "Fault" and "Fracture".
9. Explain the terms "Tone" and "Texture" in aerial photo interpretation.
10. List a few coastal protection structures.

**Part – B ( 5 x 16 = 80 marks)**

11. Give a detailed account of the types and causes of landslides. Add a note on the measures to be adopted to prevent the occurrence of landslides.
12. a) What are the landforms created due to the action of wind, waves and water along the coast? Describe all the coastal landforms in detail.  
(OR)  
b) Describe in detail the concept of plate tectonics and its relation of seismicity.
13. a) Write in detail about the mineralogical composition, physical properties and uses of Feldspar and Pyroxene group of minerals.  
(OR)  
b) Write in detail about the types, composition and properties of clay minerals. Describe the role of clay minerals in altering the engineering properties of soils.
14. a) How are rocks classified? Compare the engineering properties of slate, marble, granite and sandstone.  
(OR)  
b) What are the various engineering properties of rocks? Describe the various tests carried out to determine these properties.
15. a) Describe folds and faults in rocks. Explain their role in design and construction of dams and tunnels.  
(OR)  
b) Explain in detail the electrical methods of subsurface investigation.