

B.E. (Full Time) DEGREE END-SEMESTER EXAMINATIONS, APRIL/MAY 2011
CIVIL ENGINEERING BRANCH
THIRD SEMESTER
AG 9211 ENGINEERING GEOLOGY
(REGULATIONS 2008)

29

Duration : 3 Hours

Max Marks : 100

- Instructions: 1. Draw neat sketches wherever necessary.
2. Answer ALL questions

PART A (10 x 2 = 20 marks)

1. Write a brief note on chemical weathering of rocks.
2. List the erosional landforms produced by the work of a river.
3. Define the terms "cleavage" and "fracture" of minerals.
4. Describe the properties of biotite.
5. Compare the usefulness of granite, quartzite and limestone as concrete aggregates.
6. Describe conglomerate and breccia.
7. List the various seismic zones of India.
8. Explain the strike and dip of rocks formations.
9. List the main differences between hard rock and soft rock tunneling.
10. How does folding of rocks in the foundation affect a dam?

PART B (5 x 16 = 80)

11. Using diagrams and examples, bring out the favourable and unfavourable geological conditions for design and construction of dams.
12. (a) Give a detailed account of the geological work of the sea. Add a note of coastal erosion and coastal protection structures.
OR
(b) Give a detailed account of types of weathering of rocks.
13. (a) Using examples, describe in detail about the physical properties of minerals.
OR
(b) Describe the properties and uses of amphibole and mica group of minerals.
14. (a) List the mineral composition, texture, engineering properties and uses of limestone, basalt, dolerite and sandstone.
OR
(b) What are the different engineering properties of rocks and how are they determined in the laboratory and in the field.
15. (a) How are folds and faults in rocks formed? Describe the different folds and faults.
OR
(b) Describe the geophysical methods adopted for sub-surface investigations.