

Code: R7310106

**R7**

B.Tech III Year I Semester (R07) Supplementary Examinations, May 2013

**ENGINEERING GEOLOGY**

(Civil Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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- 1 Discuss the importance of geology in the field of civil engineering with reference to dams, reservoirs and tunnels.
- 2
  - (a) What is a rock forming mineral?
  - (b) Discuss processes of formation of minerals in nature. Which group of minerals is most common in occurrence? Briefly mention its salient features.
- 3 Distinguish between igneous, sedimentary and metamorphic rocks on the basis of origin, structure, texture, composition and utilization.
- 4 What are folds? Explain the causes and effects of folding. Explain the classification and types of folds with the help of neat sketches.
- 5 What are landslides? Explain the causes and effects of landslides. Also mention the various measures to be taken to prevent their occurrence.
- 6 Explain the principle of magnetic method of prospecting. List out the equipment used for conducting magnetic surveys. Also, discuss the geological problems which are solved by employing magnetic investigations.
- 7 Describe the salient features of a:
  - (a) Gravity dam.
  - (b) Arch dam.
  - (c) Earth dam.
- 8
  - (a) Explain briefly the various types of tunnels and their usefulness and need.
  - (b) What are general geological characteristics of the area that must be known before a tunnel project is decided in that area.

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