Printed Pages : 2

NCE-404

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 100412

Roll No.

B. Tech.

(SEM. IV) THEORY EXAMINATION, 2014-15

ENGINEERING GEOLOGY

Time : 2 Hours] [Total Marks : 50

Note: (1) Attempt all questions.

(2) Marks are indicate against each question.

(3) Assume any data suitably, if required.

1 Attempt any four parts of the following [3×4=12]

(a) What are different rock forming minerals?

(b) What is a building stone? Outline the properties and requirements of building stones.

(c) Define minerals. Define following physical properties of minerals :

(i) Fracture (ii) Cleavage (iii) Streak (iv) Hardness

(d) Explain the following (i) Strike (ii) Graded bedding (iii) Current bedding (iv) Stratification.

(e) Explain true dip and apparent dip.

(f) Explain various forms in which Igneous rocks occur in nature with the help of neat sketches.

2 Attempt any four parts of the following : [3.5×4=14]

(a) Discuss the process of formation of minerals in nature. Which group of minerals is most common in occurrence? Discuss their salient features.

(b) Distinguish between joints and faults.

(c) What are folds ? Describe various types of folds.

(d) Explain how sedimentary rocks are formed. Describe various structures present in the rocks.

(e) What is metamorphic rock? Describe the various agents of metamorphism.

(f) Define the following (a) Outlier and inliers (b) Unconformity (c) Columnar jointing.

3 Attempt any two parts of the following [6×2=12]

(a) What are landslides? Describe their types, causes and preventive measures.

(b) Define earthquakes and Tsunamies. Give a detailed account of tectonic earthquakes.

(c) Discuss ground water hazards in engineering projects.

4 Attempt any two parts of the following [6×2=121

(a) Give an account of geological investigations of dams and reservoirs.

(b) Explain the following terms : (a) Grouting (b) Geological action of ground water.

(c) Describe electrical resistivity method of site investigation.