

CE - 304

B.E. III Semester

Examination, December 2015

Engineering Geology

Time : Three Hours

www.rgpvonline.in **Maximum Marks : 70**

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each question are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.
v) Illustrate your answer with neat sketch.

Unit - I

1. a) Write short note on "Sand dunes" or Pedestal rocks.
b) Write short note on Soil Profile.
c) Explain River Meandering or Earthquake Waves.
d) Discuss the role of River/ or Glaciers as a geological agent.

OR

Discuss the concept of plate tectonics.

Unit - II

2. a) Write short note on Hardness of a mineral and Moh's scale of Hardness.
b) Explain An Axis of symmetry.
c) Write the physical properties of following Minerals -
 - i) Calcite
 - ii) Quartz
 - iii) Galena or Bauxite

- d) Discuss the physical properties of Minerals.
OR
Discuss the Elements of Crystal.

Unit - III

3. a) Write short note on Bowen's Reaction Series.
b) Write short note on the following rocks :
 - i) Granite
 - ii) Basalt
- c) Give a brief account of the Peninsular India.
d) Discuss the classification of sedimentary rocks.

OR

Discuss the Forms and Structure of Igneous rocks.

Unit - IV

4. a) Write short note on Angular Unconformity.
b) Explain the term Dip and Strike.
c) Describe with diagram Columnar Joints and Mural Joints.
d) What are Faults? How are they classified? Discuss the effects of faulting on various engineering projects.

OR

Define Folds. Discuss their various types. Add a note on their importance in Civil Engineering.

Unit - V

5. a) Explain the porosity and permeability of rocks.
b) Write short note on Compressive strength of Rocks.
c) What is water table and perched water table?
d) Explain the geological investigations needed in the construction of Roads.

OR

Write a detailed account of geological consideration in selecting a site for construction of Bridge.