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53 (CE 305) ENGE

2017

ENGINEERING GEOLOGY

Paper : CE-305

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer **any five** questions.

1. (a) Describe briefly the structure of the atmosphere around the earth. 8
- (b) Give the importance of geology for Civil Engineering. 4
- (c) What is commonly understood from the term age of earth and origin of earth ? 8
2. (a) Describe geology and highlight the main subdivisions. 10

Contd.

- (b) Describe with the help of neat sketch, various parts of faults as understood in structural geology. 10
3. (a) Which properties of minerals indicate the order of arrangement of atoms of a mineral ? Describe the various terms used for its identification. 8
- (b) How are igneous rocks formed ? Describe with illustrations, the various forms in which they occur. 12
4. (a) What is geological work ? State its different stages. 6
- (b) How sedimentary rocks are classified on the basis of grain size of their sediments ? 6
- (c) What is metamorphism ? Name the rocks which are expected to be derived by progressive metamorphism of the following rocks : (i) Sand stone (ii) Shale (iii) Lime stone. 8

5. (a) What is hydrology ? Describe the yielding capacity of igneous, sedimentary and metamorphic rocks. 8
- (b) Discuss the various types of fold and explain how they affect engineering projects ? 12
6. (a) Give an account of the mechanism of landslide. 5
- (b) What are the general properties required in building stones ? 5
- (c) What do you understand by the term earthquake ? Give its causes and effects. 10
7. Differentiate between : 20
- (i) P-wave and L-wave
 - (ii) Rotational and translational landslide
 - (iii) Cleavage and fracture
 - (iv) Adamantine and vitreous
 - (v) Monoclinic and triclinic system.