

Please check that this question paper contains 9 questions and 2 printed pages within first ten

[Total No. of Questions: 09]

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Uni. Roll No.

Program: B.Tech. (Batch 2018 onward)

Semester: 5

Name of Subject: Engineering Geology.

Subject Code: PCCE-109

Paper ID: 16386

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

- 1) Parts A and B are compulsory
- 2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice
- 3) Any missing data may be assumed appropriately

Part – A

[Marks: 02 each]

Q1.

- a) What are the main causes of discontinuity and defects in rock masses?
- b) Define landslide. discuss the role of humans in accelerating landslides.
- c) Give any four examples of rock forming minerals.
- d) Differentiate between apparent dip and true dip.
- e) What do you mean by the hardness of rock?
- f) Differentiate between magnitude and intensity of earthquake.

Part – B

[Marks: 04 each]

- Q2. What is meant by 'Rock Quality Designation'? How is rock classification done on the basis of rock quality designation?
- Q3. Discuss the origin and engineering properties of igneous rocks and sedimentary rocks.
- Q4. What are rock joints ? How do they differ from geological faults?
- Q5. Discuss various coastal landforms and their strategies to protect them from erosion.
- Q6. Describe different types of weathering and its engineering significance.
- Q7. Distinguish with the help of a neat sketch the formation of outliers from those of inliers.

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Part – C

[Marks: 12 each]

- Q8. 'The success or failure of an engineering project depends largely upon the physical conditions within the province of geology' - Professor Boyd Dawkins.
Justify the above sentence by illustrating the importance of subsurface geophysical investigation prior to major civil engineering construction.

OR

Describe the importance of geological investigation and effects of geology in dams.

- Q9. Discuss faults, their types and their effects in civil engineering structure.

OR

'Every landslide starts with a few pebbles moving in the same direction' - Robin Lings.
Relate the above quote and explain the importance of knowledge of geology in landslide mitigation and management.
