

- (g) State what are folds and faults.
(h) Define Dip and Strike.
(i) What are Laccoliths and Lopoliths ?
(j) Define rock bolting.

Roll No.

Total Pages : 04

July-22-00350

B.Tech. EXAMINATION, 2022

Semester VI (CBCS)

CIVIL ENGINEERING

CE-605

Engineering Geology and Rock Mechanics

Time : 3 Hours

Maximum Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt *Five* questions in all, selecting *one* question from each Sections A, B, C and D. Q. No. 9 is compulsory.

Section A

1. What do you know about the origin of the earth ?
Explain your answer discussing the various hypothesis.

10

2. Discuss the various factors which influence weathering. Also explain briefly the features resulting from weathering. **10**

Section B

3. Explain, what kind of geological investigation is needed in the construction of highways. Also discuss the influence of various geological factors. **10**
4. Distinguish between joints and faults. Give the classification of faults. Illustrate your answer with diagrams. **10**

Section C

5. What is texture of a rock ? Discuss briefly the types of texture seen in igneous, sedimentary and metamorphic rocks. **10**
6. Explain, why is it necessary to carry out ground investigations for tunneling projects ? **10**

Section D

7. Explain cable method of in-situ rock testing. **10**
8. What are different types of grouting ? Which one is most effective for a ground comprising fractured rocks containing enough sizeable voids ? **10**

(Compulsory Question)

9. Short answer type questions : **2×10=20**
- (a) What is Continental Drift ?
- (b) What are the main branches of Geology ?
- (c) Which are the three chief Geological Agents ?
- (d) Name the three important Physiographic divisions of India.
- (e) What are the main physical properties of minerals ?
- (f) Define igneous rocks.