

Reg. No.

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B.E. / B.TECH. DEGREE EXAMINATIONS, DEC 2019

Third Semester

CE16304 – ENGINEERING GEOLOGY*(Civil Engineering)***(Regulation 2016)****Time: Three Hours****Maximum : 100 Marks**

Answer ALL questions

PART A - (10 X 2 = 20 Marks)

	CO	RBT
1. What is meant by exfoliation?	1	R
2. Name a few secondary tectonic plates.	1	U
3. What are the varieties of plagioclase feldspar?	2	R
4. Bring out the differences between muscovite and biotite.	2	U
5. What is meant by RMR? What is its significance?	3	R
6. Differentiate between Gneiss and Schist.	3	U
7. How do joints influence the strength of rocks?	4	U
8. Using a diagram, explain the Dip and Strike of rock layers.	4	R
9. What is meant by “stand-up time” in tunneling?	5	U
10. List at least four measures to prevent coastal erosion.	5	R

PART B - (5 X16 = 80 Marks)

11. (a) Describe in detail about the process of weathering of rocks. Also write a note on the effect of weathering on the strength of rocks. (16) 1 U

(OR)

- (b) Give a detailed account of the erosional and depositional landforms created by the action of river. (16) 1 U

12. (a) Using examples list and describe the important physical properties of minerals. (16) 2 U

(OR)

- (b) Give a detailed account of the chemical composition, physical properties, origin, varieties and use of clay minerals. (16) 2 U

13. (a) Classify the rocks found on the surface and sub-surface of the earth (16) 3 U
and describe the common types of rocks.

(OR)

- (b) Mention the various engineering properties of rocks and describe the (16) 3 U
procedure adopted to determine these properties in the field and
laboratory.

14. (a) Explain how faults and folds affect the choice of locations for dams (16) 4 U
and tunnels.

(OR)

- (b) Elaborate on the electrical methods used for sub-surface (16) 4 U
investigations.

15. (a) Explain in detail, the role of remote sensing in studying geological (16) 5 U
conditions of a major civil engineering project site.

(OR)

- (b) Classify landslides and discuss about the causative factors of (16) 5 U
landslides. Also, add a note on the measures for mitigation of
landslides.