

Reg. No.

Question Paper Code

11722

**B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022**

Third Semester

**Civil Engineering**

**20CEPC305 - ENGINEERING GEOLOGY**

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

	<i>Marks, K-Level, CO</i>
1. Mention the thickness of earth's crust.	2,K1,CO1
2. Define the terms i) Focus ii) Epicenter.	2,K1,CO1
3. List the name of clay groups of minerals.	2,K1,CO2
4. Differentiate between Color and streak of minerals.	2,K2,CO2
5. Define the terms hanging wall and foot wall.	2,K1,CO4
6. Classify folds.	2,K1,CO4
7. What is meant by recumbent folds? Draw a neat diagram.	2,K2,CO5
8. Write short notes on the Attitude of beds.	2,K2,CO5
9. List the different types of landslides.	2,K1,CO6
10. Define remote sensing.	2,K1,CO6

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

11. a) Describe the internal structure and composition of the earth with neat sketches. 13,K2,CO1
- OR**
- b) Make a brief note on the erosion features formed by the geological work of wind. 13,K2,CO1
12. a) List the physical properties of minerals (Specific gravity, Luster, Cleavage, Hardness, Fracture & Crystalline characteristics) and describe each property with examples from the mineral kingdom. 13,K2,CO2
- OR**
- b) Describe the varieties, composition, properties and uses of gypsum, quartz and feldspar. 13,K2,CO2

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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13. a) Illustrate with neat sketches on folds, classification of folds, folding process and their Civil engineering significance. 13,K2,CO4

**OR**

b) Give a detailed account of the various geological structures and their role in selection of sites for engineering projects. 13,K2,CO4

14. a) Elaborate on the electrical resistivity methods of geophysical surveys used for sub-surface/ civil engineering investigations. 13,K2,CO5

**OR**

b) Describe with neat diagram the various classifications of faults (Normal, Strike, Oblique & Reverse). Add a note on civil engineering significance of faults for surface investigation. 13,K2,CO5

15. a) Explain about the various geological factors to be considered for the construction of road cuttings and construction of buildings. 13,K2,CO6

**OR**

b) Describe the types of landslide and their causative factors with a sketch and enumerate the geological investigations required for identifying land slide prone areas and mitigation of landslides. 13,K2,CO6

**PART - C (1 × 15 = 15 Marks)**

16. a) Describe the mineral composition, texture, engineering properties, origin, occurrence, varieties and uses of i) Marble and ii) Sandstone & Slate. 15,K2,CO3

**OR**

b) Discuss about the various engineering properties of rocks to be tested for constructions of buildings, dams and tunnels and explain how you will determine the engineering properties of rocks at laboratory. 15,K2,CO3