

[illegible]**SIDDHARTHA ENGINEERING COLLEGE**

II/IV B.Tech. DEGREE EXAMINATION, DECEMBER - 2024

CIVIL ENGINEERING

Time: 3 hours

Max. Marks: 70

Answer One Question from each Unit of Part - B

Answer to any single question or its part shall be written at one place only

PART-A

5 x 2 = 10M

1.
 - a. Define Minerology. (CO1 K1)
 - b. State the importance of weathering in civil engineering. (CO2 K1)
 - c. Differentiate a geological and topographic map. (CO3 K1)
 - d. List any four types of dams. (CO4 K1)
 - e. Describe the types of tunnels. (CO4 K1)



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PART-B

4 x 15 = 60M

UNIT-I

2. a. Explain the scope of geological studies in civil engineering. **(CO1 K2) 7M**
b. Write note on different physical properties of minerals and state how these are useful in the accurate identification of the mineral species. **(CO1 K2) 8M**

(or)

3. a. Explain the formation of igneous rocks. **(CO1 K2) 7M**
b. Describe the physical properties following rocks
i) Granite ii) Pegmatite iii) Sand stone iv) Marble. **(CO1 K2) 8M**

UNIT-II

4. a. Define the term weathering and explain how mechanical and chemical weathering of rocks makes them unsafe for civil construction. **(CO2 K3) 7M**
b. Classify faults on the basis of relative movement of different blocks. **(CO2 K4) 8M**

(or)

5. a. Discuss the causes and effects of earthquakes. **(CO2 K2) 7M**
b. Explain different parts of a fold and discuss engineering consideration of folding. **(CO2 K2) 8M**

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UNIT-III

6. a. Describe the Electrical Resistivity Method and its applications in civil engineering. **(CO3 K4) 7M**
b. Describe the importance of topographical and geological maps. **(CO3 K4) 8M**

(or)

7. a. Discuss the principle of the Seismic Refraction Method and its use in determining subsurface geological structures. **(CO3 K2) 7M**
b. Explain the key elements of a topographic map and how they can be interpreted to understand the terrain of an area. **(CO3 K3) 8M**

UNIT-IV

8. a. Describe various geological investigation methods used for dam construction. **(CO4 K2) 7M**
b. Analyze common reasons behind the failure of reservoirs and discuss preventive measures that can be implemented during the planning stage. **(CO4 K3) 8M**

(or)

9. a. Discuss the environmental impact of mining construction materials such as aggregates. **(CO4 K2) 7M**
b. Describe various geological investigation methods used for tunnel construction. **(CO4 K2) 8M**

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