

B.E. Civil Engineering (Model Curriculum) Semester - IV
PCCCE403 - Engineering Geology

P. Pages : 1

Time : Three Hours



GUG/S/23/13717

Max. Marks : 80

- Notes :
1. All questions carry equal marks.
 2. Assume suitable data wherever necessary.
 3. Diagrams and Chemical equation should be given wherever necessary.
 4. Illustrate your answers wherever necessary with the help of neat sketches.

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|-----------|----|--|----|
| 1. | a) | What is an earthquake? Discuss the causes of earth quake. | 8 |
| | b) | Define volcano? Describe various products of volcanoes. | 8 |
| OR | | | |
| 2. | | What is mineral? Describe various physical properties that help in their megascopic identification. | 16 |
| 3. | | What is fold? Describe various types of folds. Add a note on their importance for civil engineering works. | 16 |
| OR | | | |
| 4. | a) | A sandstone bed in a bridge abutment is dipping of 1 in 5 along N45°W. Find the direction in which its apparent dip is 1 in 8. Give procedure. Scale 1 unit = 1 cm. | 8 |
| | b) | A sandstone formation is dipping at 30° east into a sloping ground 10°W. The width of its out crop is 160m. Find the true and vertical thickness of the sandstone formation. Write procedure. Scale 1cm = 40m. | 8 |
| 5. | | What is Rock cycle? Discuss the formation of igneous rocks and add a note on tabular classification of igneous rocks. | 16 |
| OR | | | |
| 6. | | What are sedimentary rocks? How they are formed? Describe in detail textures and structures of sedimentary rocks. | 16 |
| 7. | | What are various geophysical methods? Describe the electrical resistivity method in detail. | 16 |
| OR | | | |
| 8. | | Discuss in brief the account of geological knowledge as applied in the construction of tunnels. | 16 |
| 9. | | What is ground water? Discuss various zones of ground water below the surface. | 16 |
| OR | | | |
| 10. | | Differentiate between following | 16 |
| | a) | Aquifer Aquiclude | |
| | b) | Unconfined and confined aquifer | |
| | c) | Artesian well and Non Artesian well | |
| | d) | Contact spring and fault spring. | |
