

Enrollment No.....



Faculty of Engineering
End Sem (Even) Examination May-2019
CE3CO03 Engineering Geology
Programme: B.Tech. Branch/Specialisation: CE

Duration: 3 Hrs.**Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

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|-----|------|--|----------|
| Q.1 | i. | Branch of Geology which deals with study of fossils is | 1 |
| | | (a) Petrology (b) Structural Geology | |
| | | (c) Palaeontology (d) All of these | |
| | ii. | The thickness of crust will be more | 1 |
| | | (a) In Sea (b) In Mountains | |
| | | (c) In both areas (d) None of these | |
| | iii. | Crystal System with four crystallo graphic axes is | 1 |
| | | (a) Cubic system (b) Monoclinic system | |
| | | (c) Hexagonal system (d) Tetragonal system | |
| | iv. | Lusture of a broken glass | 1 |
| | | (a) Pearly Lusture (b) Earthy Lusture | |
| | | (c) Waxy Lusture (d) Vitreous Lusture | |
| | v. | Which are the sedimentry structures? | 1 |
| | | (a) Columnar joints, mural joints | |
| | | (b) Schistose structure, Granulous structure | |
| | | (c) Ripple marks, Mud cracks | |
| | | (d) All of these | |
| | vi. | The factors which are responsible for the process of Metamorphism are: | 1 |
| | | (a) Temperature (b) Pressure in the hydrostatic sense | |
| | | (c) Stress (d) All of these | |
| | vii. | Fold with horizontal axial plane is | 1 |
| | | (a) Isoclinal fold (b) Recumbent | |
| | | (c) Parallel fold (d) Synclinorium | |

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| | viii. | True dip is always. | 1 |
| | | (a) Parallel to strike (b) Perpendicular to strike | |
| | | (c) Equal to strike (d) All of these | |
| | ix. | Perched water table is a | 1 |
| | | (a) Permanent water table (b) Isolated water table | |
| | | (c) Saturated water table (d) None of these | |
| | x. | Satellite remote sensing system is divided mainly into | 1 |
| | | (a) Three step (b) Four step | |
| | | (c) Two Segments (d) None of these | |
| Q.2 | i. | Write notes on: | 4 |
| | | (a) Soil formation (b) Earth quakes & their types. | |
| | ii. | Explain internal structure of earth with neat diagram? | 6 |
| OR | iii. | Write Short notes on: | 6 |
| | | (a) Soil Profile (b) Movement of tectonic plates | |
| | | (c) Weathering and its types | |
| Q.3 | i. | What are the different physical properties of a mineral briefly explain Lusture? | 2 |
| | ii. | Name Various crystal systems and explain any one in detail with axial diagram? | 8 |
| OR | iii. | Write physical properties of: | 8 |
| | | (a) Quartz (b) Calcite (c) Gypsum (d) Feldspar | |
| Q.4 | i. | Define Igneous rocks and Explain their classification in brief? | 4 |
| | ii. | Explain Physiographic sub-division of India in details. | 6 |
| OR | iii. | Write short notes on: | 6 |
| | | (a) Agents of Metamorphism. | |
| | | (b) Structures of Sedimentary rocks. | |
| | | (c) Standard Geological Time Scale. | |
| Q.5 | i. | Define (with diagram): | 4 |
| | | (a) Dip (b) Strike | |
| | ii. | Define folds and give their detailed classification with diagram. | 6 |

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| OR | iii. | Write notes on (with diagram): | 6 |
| | | (a) None conformity (b) Recumbent fold | |
| | | (c) Joints & their types | |
| Q.6 | | Attempt any two: | |
| | i. | What are the important geological consideration for civil engineering project site selection? | 5 |
| | ii. | Write short notes on: | 5 |
| | | (a) Aquifers (b) Land slides | |
| | | (c) Water table | |
| | iii. | How the study of remote sensing is useful for various site selection in civil engineering projects? | 5 |

Marking Scheme
CE3CO03 Engineering Geology

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|-----|-------|---|----------|
| Q.1 | i. | Branch of Geology which deals with study of fossils is (c) Palaeontology | 1 |
| | ii. | The thickness of crust will be more (b) In Mountains | 1 |
| | iii. | Crystal System with four crystallo graphic axes is (c) Hexagonal system | 1 |
| | iv. | Lusture of a broken glass (d) Vitreous Lusture | 1 |
| | v. | Which are the sedimentry structures? (c) Ripple marks, Mud cracks | 1 |
| | vi. | The factors which are responsible for the process of Metamorphism are: (d) All of these | 1 |
| | vii. | Fold with horizontal axial plane is (b) Recumbent | 1 |
| | viii. | True dip is always. (b) Perpendicular to strike | 1 |
| | ix. | Perched water table is a (b) Isolated water table | 1 |
| | x. | Satellite remote sensing system is divided mainly into (a) Three step | 1 |
| Q.2 | i. | Write notes on: (a) Soil formation (b) Earth quakes & their types. | 4 |
| | ii. | Internal structure of earth Name of parts Diagram Explanation | 6 |
| | OR | iii. Write Short notes on: (a) Soil Profile (b) Movement of tectonic plates (c) Weathering and its types | 6 |
| Q.3 | i. | Physical properties of a mineral briefly Explanation of Lusture | 2 |
| | ii. | Name Various crystal systems Any one Axial diagram | 8 |

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|-----|------------------|--|----------|
| OR | iii. | Write physical properties of: (a) Quartz (b) Calcite (c) Gypsum (d) Feldspar | 8 |
| | | 2 marks 2 marks 2 marks 2 marks | |
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| | | | |
| Q.4 | i. | Definition of Igneous rocks Their classification | 4 |
| | | 1 mark 3 marks | |
| | ii. | Physiographic sub-division of India Names of divisions Explanation of each division 2.5 marks for each division (2.5 marks * 2) | 6 |
| | | 1 mark 5 marks | |
| OR | iii. | Write short notes on: (a) Agents of Metamorphism. (b) Structures of Sedimentary rocks. (c) Standard Geological Time Scale. | 6 |
| | | 2 marks 2 marks 2 marks | |
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| Q.5 | i. | Define (with diagram): (a) Dip (b) Strike | 4 |
| | | 2 marks 2 marks | |
| | ii. | Definition of folds Classification with diagram | 6 |
| | | 1 marks 5 marks | |
| OR | iii. | Write notes on (with diagram): (a) None conformity (b) Recumbent fold (c) Joints & their types | 6 |
| | | 2 marks 2 marks 2 marks | |
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| Q.6 | Attempt any two: | | |
| | i. | Important geological consideration for civil engineering project site selection Names of considerations Explanation | 5 |
| | | 2 marks 3 marks | |
| | | | |
| | ii. | Write short notes on: (a) Aquifers (b) Land slides (c) Water table | 5 |
| | | 2 marks 1.5 marks 1.5 marks | |
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| | iii. | Definition of remote sensing Various uses | 5 |
| | | 1 mark 4 marks | |
