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Question Paper Code: 53102

B.E./B.Tech. DEGREE EXAMINATION, MAY 2018

Third Semester

Civil Engineering

15UCE302 -ENGINEERING GEOLOGY AND CONSTRUCTION MATERIALS

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

PART A - (10 x 1 = 10 Marks)

Answer All Questions

1. Which of the following is NOT an example of a metamorphic rock? CO1- R
(a) Gneiss (b) Schist (c) Marble (d) basalt
2. Example of sedimentary rock is CO1- R
(a) Basalt (b) Marble (c) Slate (d) Limestone
3. Earthquake wave which showing longitudinal particle motion CO2- R
(a) P-waves (b) S-waves (c) L-waves (d) R-waves
4. A theory explaining the structure of the earth's crust and many associated phenomina CO2- R
(a) Plate tectonics (b) Landscape theory (c) Earth science (d) Seismic theory
5. A first class brick should have a minimum crushing strength of CO3- R
(a) 7 MN/m² (b) 10.5 MN/m² (c) 12.5 MN/m² (d) 14 MN/m²

6. A good quality stone absorb water less than CO3- R
 (a) 0.4% (b) 0.6% (c) 0.2% (d) 0.7%
7. The mortar in which both cement and lime are used as binding materials is called CO4- U
 (a) Fire resistance mortar (b) Light weight mortar
 (c) Gauged mortar (d) None of these
8. The soundness of cement is tested by CO4-App
 (a) Air permeability method (b) Le Chatelier method
 (c) Vicat's apparatus (d) None of these
9. The plywood CO5-App
 (a) has good strength along the panel only
 (b) can be split in the plane of panel
 (c) has greater impact resistance to blow the ordinary wood
 (d) cannot be bend more easily than the ordinary brick of same thickness
10. The approximate percentage of carbon content in structural mild steel is about CO5- R
 (a) 0.10% (b) 0.05% (c) 0.30% (d) 0.25%

PART – B (5 x 2= 10Marks)

11. What are the physical properties of minerals? CO1- U
12. Define folds and faults in earth's structure. CO2- U
13. Differentiate between Gneiss and Schist. CO3- U
14. Define consistency. CO4- U

15. What are the methods of seasoning of timber? CO5- U

PART – C (5 x 16= 80Marks)

16. (a) Explain in detail about the physical properties of minerals and give two mineral examples for each property. CO1-U (16)

Or

(b) Describe the different types of rocks. Give the classification, texture and structures of sedimentary rocks. CO1 -U (8)

17. (a) Describe in detail about plate tectonics and continental drift. CO2 -U (16)

Or

(b) Describe with a neat diagram, the various classification of faults. Also discuss the civil engineering significance of faults. CO2 -U (16)

18. (a) Explain in detail about the manufacturing process of bricks. CO3- App (16)

Or

(b) Explain with sketches the different types of stone masonry and brick masonry. CO3- App (16)

19. (a) Describe in detail about the process of manufacturing of cement by wet and dry process CO4-App (16)

Or

(b) Explain in neat sketches the manufacture of cement. CO4 -U (16)

20. (a) Explain the various defects in timber. Describe the different prevention methods. CO5- U (16)

Or

(b) Explain the manufacturing process, properties and civil engineering applications of steel. CO5- U (16)

