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Question Paper Code: U3102

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Third Semester

Civil Engineering

21UCE302- ENGINEERING GEOLOGY AND CONSTRUCTION MATERIALS

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Specific gravity of Quartz is, CO1- U
(a) 3.15 (b) 2.65 (c) 2.85 (d) 3.71
2. The point of origin of earthquake within the earth's crust is called CO1- U
(a) focus (b) epicenter (c) isoseismal lines (d) none of the above
3. The number of standard bricks required for one cubic metre of brick masonry is CO1- U
(a) 400 (b) 500 (c) 750 (d) 250
4. The initial setting time of ordinary Portland cement should not be less than CO1- U
(a) 15 minutes (b) 30 minutes (c) 45 minutes (d) one hour
5. The moisture content of Unseasoned/Green timber is, CO1- U
(a) 25% (b) 30% (c) 20% (d) 35%

PART – B (5 x 3= 15 Marks)

6. Describe a brief note on stratification. CO1- U
7. What is mean by Pedestal Rocks and how it is formed? CO1- U
8. What is meant by efflorescence? CO1- U
9. What is meant by hydration of cement? CO1- U
10. When and where distemper is used? CO2- App

PART – C (5 x 16= 80Marks)

11. (a) Explain in detail about the formation of rocks and its engineering importance. CO1- U (16)
- Or
- (b) Explain physical and chemical weathering process in detail. Add a note on weathering grade and its engineering significance. CO1- U (16)
12. (a) Mention the concept of plate tectonics and describe how earthquakes occur. Add a note on the distribution of earthquake in the world and in India. CO1- U (16)
- Or
- (b) Explain composition of the earth structure with neat diagram CO1- U (16)
13. (a) Illustrate the different tests conducted on stones? Explain in detail with neat sketches. CO2- App (16)
- Or
- (b) Describe with neat sketches the manufacturing process of conventional bricks. CO2- App (16)
14. (a) Construct a flow diagram for dry and wet process of manufacture of cement with brief explanation CO2- App (16)
- Or
- (b) Enumerate the methods of preparation of lime mortar. Describe any two major tests to determine the quality of lime. CO2- App (16)
15. (a) List and explain the various methods of seasoning of timber. CO1- U (16)
- Or
- (b) Write a brief note on mechanical and heat treatment of steel? CO1- U (16)