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Question Paper Code:R1104

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

First Semester

Civil Engineering

R21UCE104- ENGINEERING GEOLOGY & CONSTRUCTION MATERIALS

(Regulations R2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (5x 1 = 5 Marks)

1. The branch of geology which deals with various aspects of rocks is CO1-U
(a) Marble (b) Schist (c) Slate (d) Gneiss
2. The Fractures Along Which There Has Been Relative Movement Of CO1-U
Blocks Called
(a) Folds (b) Joints (c) Faults (d) Intrusions
3. The number of standard bricks required for one cubic metre of brick CO1-U
masonry is
(a) 400 (b) 500 (c) 750 (d) 250
4. The consistency test is performed to find CO1-U
(a) W/c ratio (b) fineness (c) compressive strength (d) tensile strength
5. PVC stands for CO1-U
(a) plastic very compact (b) polythene vinyl chloride
(c) polythene vinyl carbon (d) polythene vanadium carbide

PART – B (5 x 3= 15Marks)

6. Illustrate the term Texture and its types? CO2- App
7. Illustrate the effects of faulting. CO2- App
8. Model the standard size of brick used for construction with neat sketch. CO2- App

9. Define Elongation index. CO1- U
10. Enumerate the various defects in timber. CO1- U

PART – C (5 x 16= 80 Marks)

11. (a) Describe the various physical properties of minerals and describe each property with examples. CO1- U (16)
- Or
- (b) Explain in detail about the classification of weathering process in rocks. CO1- U (16)
12. (a) Interpret the geological factors influencing civil engineering Construction & their uses. CO1- U (16)
- Or
- (b) Illustrate with neat sketch about the structure of the earth and its composition. CO1- U (16)
13. (a) Illustrate the different tests conducted on stones? Explain in detail with neat sketches. CO1- U (16)
- Or
- (b) Illustrate the following test on bricks CO1- U (16)
- (i) Compressive strength test
 - (ii) Efflorescence test
 - (iii) Water absorption test
 - (iv) Shape & size test
 - (v) Soundness test
14. (a) Illustrate the manufacturing process of cement with the flowchart. CO2- App (16)
- Or
- (b) Illustrate the various laboratory test methods for cement. CO2- App (16)
15. (a) Analyze the various considerations to be made in choosing paints and also explain about the types of paints. CO3-Ana (16)
- Or
- (b) Illustrate the treatment methods of steel in detail and also explain about the types of paints. CO3- Ana (16)