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B1D004S

Reg. No. _____ Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIRST SEMESTER B.TECH DEGREE EXAMINATION, JULY 2017

Course Code: **BE101-01**

Course Name: **INTRODUCTION TO CIVIL ENGINEERING**

Max. Marks: 100

Duration: 3 Hours

PART A

Answer ALL questions. Each question carries 1 mark

1. What is the function of foundation of the building?
2. What is efflorescence?
3. List the major ingredients of cement with their general percentages?
4. What is bonding in brick masonry?
5. What is plain carbon steel?
6. What is roof pitch and how would you determine it?

PART B

Answer ALL questions. Each question carries 5 marks

7. Classify the types of building as per national building code of India. (5)
8. What are the factors to be considered while selecting tiles? (5)
9. What is fineness modulus of aggregates? Explain the laboratory test for assessing the Fineness modulus. (2+3)
10. Draw the plan and elevation of (a) one brick thick (b) one and a half brick thick english bond. (2.5+2.5)
11. List down the various market forms of structural steel. Explain two of them in detail. (5)
12. What are the various factors affecting the choice of flooring materials? (5)

PART C

Answer Any 3 questions. Each question carries 6 marks

13. What are the factors affecting selection of site of residential buildings?
14. With a neat sketch, show the different components of a building structure and indicate the functions of any three components.
15. Explain the manufacturing process of tiles.
16. Explain the formation of different rocks coming under geological classification of rocks. Give two examples for each of them.

Answer Any 3 questions. Each question carries 6 marks

17. Explain the laboratory test methods for determining (a) Consistency test of cement (b) soundness test of cement. (3+3)
18. With a flow diagram, explain the manufacturing process of cement. (6)
19. Differentiate between rubble and ashlar masonry. Explain different classes of rubble masonry. (6)
20. List the different types of bonds. Compare english bond with flemish bond. (6)

PART D

Answer Any 4 questions. Each question carries 7 marks

21. (a) What is meant by preservation of timber? (1)
(b) What are the various preservatives used. Explain the method of preservation by means of any *three* preservatives. (6)
22. Explain in detail the *three* different causes for defects in timber. (7)
23. Differentiate between TMT and HYSD bars. Describe the properties of each of them in detail. (7)
24. With neat sketches, explain king post truss and queen post truss. (7)
25. List the different types of flat roofs. Explain *two* of them in detail with neat sketches. (7)

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