

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
 B.Tech Degree S1 (S,FE) S2 (S) Examination May 2022 (2015 Scheme)



**Course Code: BE101-01**

**Course Name: INTRODUCTION TO CIVIL ENGINEERING**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer all questions, each carries 1 marks*

Marks

- |   |  |     |
|---|--|-----|
| 1 | Name the specialization in civil engineering which deals with design of foundations? | (1) |
| 2 | What is the standard size of a brick?  | (1) |
| 3 | What are the important tests for fine aggregates?                                    | (1) |
| 4 | What is the need for soaking brick in water before construction?                     | (1) |
| 5 | What are the main constituents of steel?   | (1) |
| 6 | Which type of wooden truss carry maximum span?                                       | (1) |

**PART B**

*Answer all questions, each carries 5 marks*

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|----|--|-----|
| 7  | Explain the significance of five important specializations in Civil Engineering? | (5) |
| 8  | What are the various tests to ensure the quality of brick?                       | (5) |
| 9  | a) What are the processes involved in manufacturing of ordinary cement?          | (2) |
|    | b) Mention any six physical properties of cement.                                | (3) |
| 10 | What are the differences between stone masonry and brick masonry?                | (5) |
| 11 | With figures explain any five structural steel sections?                         | (5) |
| 12 | What are the factors that affect choice of floor material?                       | (5) |

**PART C**

**Module I & II**

*Answer any three full questions, each carries 6 marks*

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|----|---|-----|
| 13 | Explain the procedure for setting out of a simple building?     | (6) |
| 14 | With a neat sketch, explain the important parts of a building.  | (6) |
| 15 | What are the qualities of good building stone?                  | (6) |
| 16 | What are the factors to be considered while selecting a quarry? | (6) |

**Module III & IV**

*Answer any three full questions, each carries 6 marks*

- 17 a) Name the different grades of cement? (2)  
b) How is cement mortar prepared? (4)
- 18 a) What is English bond? What are its merits? (3)  
b) What are the different types of tiles available in the market? (3)
- 19 Enlist any six different types of cement? What is the need for rapid setting and rapid hardening cement? (6)
- 20 a) Sketch the elevation and plan of a 1 brick thick wall using English bond and mention any two advantages of English Bond. (3)  
b) Compare coursed rubble masonry with random rubble masonry? (3)

**Module V & VI**

*Answer any four full questions, each carries 7 marks*

- 21 Explain any five methods used for preservation of timber? (7)
- 22 Discuss various types of reinforcing steel usually used in concrete work? (7)
- 23 With sketches explain a King post truss and queen post truss. What is the main difference between the two? (7)
- 24 a) What are the requirements of a good flooring material? (4)  
b) How do natural seasoning and artificial seasoning differ? (3)
- 25 What are the factors to be considered for selection of roofing materials? (7)

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