

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

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

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
FIRST SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018

**Course Code: BE101-01**

**Course Name: INTRODUCTION TO CIVIL ENGINEERING**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer all questions, each carries 1 mark.*

Marks

- |   |  |     |
|---|--|-----|
| 1 | The branch of Civil Engineering dealing with flow characteristics and mechanics of water is known as ..... | (1) |
| 2 | Define seasoning of stones.  | (1) |
| 3 | Which are the different grades of ordinary Portland cement?  | (1) |
| 4 | Define a stretcher course.   | (1) |
| 5 | What is the carbon content in mild steel, medium carbon steel and high carbon steel?                       | (1) |
| 6 | Define pitch of a roof.  | (1) |

**PART B**

*Answer all questions, each carries 5 marks.*

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|----|---|-----|
| 7  | Explain setting out of building.  | (5) |
| 8  | What is meant by quarrying of stones? What are the different methods of quarrying and explain any one method in detail. | (5) |
| 9  | a) What is meant by bulking of sand.  | (2) |
|    | b) State the properties of good sand.   | (3) |
| 10 | Write short note on Random Rubble masonry.  | (5) |
| 11 | What are the various defects occur in timber due to natural forces.   | (5) |
| 12 | Write the requirements of a Good roofing material.  | (5) |

**PART C**

**Module I & II**

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

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|----|---|-----|
| 13 | Explain various components of a residential building. Give the functions of any three components.     | (6) |
| 14 | Classify various types of buildings on the basis of occupancy as per National Building Code of India. | (6) |
| 15 | What are the qualities of good building bricks?   | (6) |
| 16 | Explain the manufacture of clay tiles.  | (6) |

**Module III & IV**

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

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|----|--|-----|
| 17 | a) What are the various steps involved in the manufacturing of Ordinary Portland Cement. | (2) |
|----|--|-----|

- b) With the help of a flow chart explain any one method for mixing raw materials during manufacturing of cement. (4)
- 18 a) State the important properties of mortar. (3)  
b) Explain the preparation of mortar by Hand mixing. (3)
- 19 What are the different types of ashlar rubble masonry (6)
- 20 a) Differentiate between English Bond and Flemish Bond. (3)  
b) Draw the plan and elevation of one brick wall in English Bond. (3)

### Module V& VI

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

- 21 What is meant by seasoning of timber? Explain different methods of seasoning of timber. (7)
- 22 Write short notes on Particle Board & Hard Board. (7)
- 23 What are the various types of steel sections manufactured and marketed? Explain any three structural steel sections with neat sketch. (7)
- 24 a) What are the different types of floors? (4)  
b) What are the various Criteria for selecting Flooring materials? (3)
- 25 What are the advantages and disadvantages of Flat roofs? Explain any two types of flat roofs. (7)

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