

Reg No.: _____

Name: _____

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

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 | List any four types of civil engineering structures. | (1) |
| 2 | List any four methods of quarrying of stones | (1) |
| 3 | What is meant by 43 grade cement? | (1) |
| 4 | In which type of construction zig zag bond is used? | (1) |
| 5 | List any four types of steel used in building construction. | (1) |
| 6 | List any four types of roof covering materials used for pitched roof. | (1) |

PART B

Answer all questions, each carries 5 marks.

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| 7 | List out the general classification of buildings according to NBC (Description is not required). Classify the below buildings (Subdivision should be taken into account). Factory, Nuclear plant, Garage, Cinema theatre, Hospitals, Regular school building. | (5) |
| 8 | Describe any two tests on building stone with IS specification. | (5) |
| 9 | What are the ingredients of cement? What is their relevance in quality of cement? | (5) |
| 10 | What are the advantages and disadvantages of stone masonry over brick masonry? | 5 |
| 11 | Sketch and explain any six types of defects in timber. How it will affect the quality of timber? | (5) |
| 12 | Describe any four types of floor covering materials. Indicate under what situations these can be used. | (5) |

PART C

Module I & II

Answer any three full questions, each carries 6 marks.

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| 13 | With a neat sketch mark the different components of a building and indicate the function of each one. | (6) |
| 14 | What are the different types of roofing tiles? Explain the different steps involved in the manufacturing of roofing tiles. | (6) |
| 15 | a) What is meant by setting out of a building? Explain the process of setting out for constructing a building | (4) |
| | b) List the different tests for determining the quality of brick. Explain any two with IS specification. | (2) |
| 16 | a) Differentiate between Chimneys and Silos. | (2) |
| | b) What is meant dressing of stones? Explain any four methods. | (4) |

Module III & IV

Answer any three full questions, each carries 6 marks.

- 17 Name the different lab tests on cement. Explain the determination of setting time of cement with IS specification. Mention any two field tests also. (6)
- 18 Draw the plan, section and elevation of two consecutive courses of one and a half brick thick wall in English bond. (6)
- 19 a) Explain the procedure for the determination of aggregate crushing value with IS specification. (3)
- b) Differentiate between dry rubble masonry and polygonal masonry with necessary sketches. (3)
- 20 a) List the different types of mortar. Explain the preparation of cement mortar. (3)
- b) Differentiate between header bond and stretcher bond with necessary sketches. (3)
- For which type of construction this can be used.

Module V & VI

Answer any four full questions, each carries 7 marks.

- 21 a) Explain the process of manufacturing of particle board. (3)
- b) Explain any four types of steel with their uses. (4)
- 22 What is meant by seasoning of timber. Explain the different methods of artificial seasoning. (7)
- 23 Draw a neat sketch of a sloping roof and mark the different parts. Under what situations this can be used (7)
- 24 a) What are the factors affecting the selection of floor covering materials. (4)
- b) List any three types of floor covering materials. State under what type of building these are used. (3)
- 25 a) Explain any two types of timber products available in the market with their uses. (4)
- b) Differentiate between flat roof and sloping roof. (3)
