

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

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

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

**Course Code: CE100**

**Course Name: BASICS OF CIVIL ENGINEERING**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer all questions, each carries 3 marks.*

- |    |   | Marks |
|----|---|-------|
| 1  | List any six types of buildings as per occupancy according to National Building Code. | (3)   |
| 2  | Explain the term plinth area, floor area and carpet area.                             | (3)   |
| 3  | What are the advantageous of Total Station over conventional survey instruments?      | (3)   |
| 4  | Differentiate between plain cement concrete and reinforced cement concrete.           | (3)   |
| 5  | Describe the functions of foundations.  | (3)   |
| 6  | Draw neatly the elevation of a one brick thick English Bond.                          | (3)   |
| 7  | What is meant by bearing capacity of soil?  | (3)   |
| 8  | Differentiate between Elevator and Escalator.   | (3)   |
| 9  | What are the different types of Air Condition equipment based on location?            | (3)   |
| 10 | Mention any three points to be kept in mind while preparing site plan for a building. | (3)   |

**PART B**

*Answer any eight questions, each carries 6 marks.*

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|----|---|-----|
| 11 | Mention the different components of a building with neat sketch. Describe the functions of any three components.  | (6) |
| 12 | What is meant by setting out of a building? Explain the procedure for setting out of a single room building with neat sketch.   | (6) |
| 13 | What is meant by ranging? Describe the procedure adopted in direct ranging.   | (6) |
| 14 | The following consecutive readings were taken with a dumpy level. 1.89, 1.14, -1.36, 2.75, 1.02, 1.52, 1.07. The level is shifted after fourth and sixth readings. The reduced level of first point was 100.00. Draw page of level field book and enter the readings on it. Also find the reduced levels of all the points. Use height of instrument method and do necessary checks also. | (6) |

- 15 List the properties of good building bricks. Explain any five. (6)
- 16 What are the factors to be considered while selecting the site for a building? (6)
- 17 What is meant by orientation of a building? Why it is important for building? (6)
- 18 List the different types of cement. Explain any three of them. (6)
- 19 Explain any four market forms of steel. (6)
- 20 What are the different instruments used for a chain surveying? Explain any three. (6)

**PART C**

*Answer any two questions, each carries 11 marks.*

- 21 a) Explain any six types of pitched roof with figure. (6)
- b) What is meant by chimney? Mention any three situations at which chimney are preferred. What are the points to be considered While constructing tall chimney? (5)
- 22 a) Explain any four types of shallow foundations with neat figure. (6)
- b) What is meant by Tower? List the different types of tower based on structural action. Describe with at least two sentences. (5)
- 23 a) Explain briefly the concept of intelligent buildings. (6)
- b) Explain the procedure for painting on a wall surface. (5)

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