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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIRST/SECOND SEMESTER B.TECH DEGREE EXAMINATION, JULY 2016

Course Code: CE100

Course Name: BASICS OF CIVIL ENGINEERING

Max. Marks: 100 Duration: 3 Hours

PART A

Answer ALL questions. Each question carries 3 marks

- List out any six disciplines of civil engineering.
- 2. What are the factors affecting site selection of a building?
- 3. What is direct ranging?

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- 4. Illustrate any 6 properties of good bricks.
- 5. What do you mean by bearing capacity of soil?
- 6. What are the various flooring materials available?
- 7. Differentiate between header bond and stretcher bond.
- 8. Discuss the principles of comfort air conditioning
- Explain about towers and its uses?
- 10. What do you mean by intelligent building?

PART B

Answer any 8 questions (6 x 8 = 48 Marks)

- 11. Describe with sketches the components of a residential building.
- 12. How can you classify the buildings based on occupancy according to National Building Code? Explain briefly.
- 13. Describe about the site plan of buildings.
- 14. Explain setting out of a building.
- 15. What are the factors affecting orientation of a building?
- 16. What are the main principles of surveying?
- 17. The following consecutive readings were taken with a dumpy level: 0.555, 0.725, 1.235, 0.73, 0.825, 1.560, 0.285, 0.945, 0.785, 2.465. The instrument was shifted after the third and seventh reading. The first reading was taken on a benchmark whose R.L. is 100.00 metres. Rule out the

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page of a level field book and enter the above readings. Calculate the reduced levels of stations and apply arithmetic check.

- 18. What are the constituents of good brick earth?
- 19. Explain types of cements and its uses.

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Mention the physical and chemical properties of OPC.

PART C

Answer any 2 full questions

| 21. | a) Write short note on emulsion and distempering | (5) |
|-----|---|-----|
| | b) Describe the functions of various types of foundations | (6) |
| 22. | a) Explain the method of applying plaster on a wall surface. | (5) |
| | b) Explain the civil engineering aspects of escalators and elevators in detail? | (6) |
| 23. | a) What are the practical measures to provide sound insulation in a building? | (5) |
| | b) What are the limitations of intelligent buildings over ordinary buildings? | (6) |

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