

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

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

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
SECOND SEMESTER B.TECH DEGREE EXAMINATION, JUNE 2017

Course Code: **CE 100**Course Name: **BASICS OF CIVIL ENGINEERING**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer all questions. Each question carries 3 marks.*

1. List any six disciplines of civil engineering.
2. Why orientation of a building is important?
3. Explain datum, bench mark and line of collimation.
4. What are the functions of lime and silica on brick earth?
5. Differentiate between Plain cement concrete and Reinforced cement concrete.
6. What do you mean by bearing capacity of soil?
7. Differentiate between header bond and stretcher bond.
8. Explain the following terms King post, Eaves and Ridge.
9. List out any six commonly used sound proofing materials.
10. Explain ramps and its uses.

**PART B**

*Answer any 8 questions. Each question carries 6 marks.*

11. How buildings are classified as per occupancy according to national building code?
12. What are the factors to be considered while selecting the site for a residential building?
13. Draw a site plan incorporating all the necessary details.
14. What are the points to be considered while selecting the position of doors and windows in a building?
15. What is ranging? Explain the procedure of direct ranging by eye.
16. Explain different types of chain.
17. The following consecutive readings were taken with a dumpy level and levelling staff on continuously sloping ground at 30m intervals. 0.680, 1.455, 1.855, 2.330, 2.885, 3.380, 1.055, 1.860, 2.265, 3.540, 0.835, 0.945, 1.530, 2.250. The reduced level of starting point was 80.750.
  - a. Rule out a page of level book and enter the above readings.
  - b. Apply the arithmetic checks.
  - c. Determine the gradient of line joining first and last point.
18. What are the constituents of cement? Explain the function of each.
19. What are the functions of sand in mortar?
20. Explain any three types of cement and its uses?

**PART C**

*Answer any two full questions. Each question carries 11 marks.*

21. a. Explain in one or two sentences different types of shallow foundations with neat sketch. (6)  
b. Explain the procedure of plastering in two coats. (5)
22. a. What are the characteristics of an ideal paint? (5)  
b. What is the concept of green building? (6)
23. a. Explain different air conditioning systems. (5)  
b. Explain the civil engineering aspects of tower. (6)

