

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIRST SEMESTER B.TECH DEGREE EXAMINATION(2019 scheme), DECEMBER 2019

Course Code: EST 120
Course Name: BASICS OF CIVIL & MECHANICAL ENGINEERING

PART I: BASIC CIVIL ENGINEERING
(2019-Scheme)

Max. Marks: 50

Duration: 90 min

PART A*Answer all questions, each carries 4 marks.*

- 1 Explain any two major disciplines of civil engineering.
- 2 What are the qualities of a good building stone?
- 3 Discuss the principles of surveying.
- 4 List out the criteria for the selection of a good roofing material.
- 5 Define bearing capacity of soil.

(5x4=20)

PART B*Answer one full question from each module, each question carries 10 marks***Module-I**

- 6 a) Discuss the components of a residential building with a neat figure. (5)
- b) Explain the role of NBC, KBR and CRZ norms in building rules. (5)

OR

- 7 a) Discuss the requisites of a good site plan for a building. (5)
- b) List out any five major factors to be considered for the selection of a good site for a residential building. (5)

Module-II

- 8 a) Explain the types and uses of architectural glass as a construction material. (5)
- b) With sketches explain any five market forms of steel section and their uses. (5)

OR

- 9 a) List out any five major qualities of a good timber. (5)
- b) List out two uses of any five different types of cement. (5)

Module-III

- 10 a) With a neat sketch explain any two types of shallow foundation. (5)
- b) With neat sketches compare English bond and Flemish bond. (5)

OR

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- 11 a) Explain the water management and energy management in green buildings. (5)
- b) Discuss the civil engineering aspects of MEP and HVAC in a commercial building. (5)