

NTK/KW/15–7288

First Semester B. E. (CBS) Examination

BASICS OF CIVIL ENGINEERING

Time : Two Hours]

[Max. Marks : 40

- N. B. :
- (1) All questions carry equal marks.
 - (2) Assume suitable data wherever necessary.
 - (3) Illustrate your answers wherever necessary with the help of neat sketches.
 - (4) Use of Non – Programmable calculator is permitted.

1. (a) What are the general considerations for selection of Site ? 5
- (b) List out the Principles of building planning. Explain any four. 5

OR

2. (a) State various types of buildings with their functions. 4
 - (b) A plot is having dimensions 50 m × 60 m. A building constructed on it occupies 700 m² on ground floor and 550 m² on first floor. If permissible FSI is 0.8, how much area can be constructed on second floor ? 6
3. (a) Explain various Principles of Surveying. 5
 - (b) What are the different types of Pavements ? Explain with neat sketch. 5

NTK/KW/15–7288

Contd.

OR

4. (a) What are the various instruments used in surveying ? Explain Digital Planimeter and Total Station. 6
- (b) Draw a typical cross –section of a Highway. 4
5. (a) Draw flowchart of Water Treatment process and state purpose of each unit. 5
- (b) For a town of population 1 lakh, the per capita consumption is 270 litres/capita/day. Calculate the quantity of supply water required for the town. Also, give the breakage of domestic demand. 5

OR

6. (a) Explain the different types of dams. Draw the cross –section of Gravity dam. 5
- (b) Explain Rainwater Harvesting. 5
7. (a) Explain the concept of Green building. 5
- (b) What are the different types of strain gauges ? Explain Electrical resistance strain gauge. 5

OR

8. (a) Explain Spectrophotometer. 5
- (b) Explain the role of Civil Engineer in Sustainable development. 5

NTK/KW/15 – 7288

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