

Total No. of printed pages = 3

CE 181304

Roll No. of candidate

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2/31

2021

DR. D. HANUMANTH
Principal
Anna University
Chennai - 600 025

B.Tech. 3rd Semester End-Term Examination

CE

BUILDING CONSTRUCTION AND PLANNING

(New Regulation and New Syllabus)

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer question No. 1 and any *four* from the rest.

1. Answer the following multiple-choice questions : (10 × 1 = 10)
- (i) The vertical distance between two successive tread faces is known as
- (a) Riser (b) Tread
(c) Rise (d) Going
- (ii) Which group of buildings used for highly combustible or explosive materials?
- (a) Group H (b) Group E
(c) Group F (d) Group J
- (iii) When the independent footings of two columns are connected by a beam, it is called
- (a) Strip footing (b) Strap footing
(c) Combined footing (d) Raft footing
- (iv) The 9 cm × 9 cm side of a brick as seen in the wall face, is generally known as
- (a) Header (b) Stretcher
(c) Face (d) Front

[Turn over

- (v) Water Supply, Sewerage and drainage are integral part of building planning
 (a) True (b) False
- (vi) Hip roof has slope in how many directions?
 (a) One (b) Two
 (c) Four (d) No slope
- (vii) For tall buildings, the length of raker can be reduced by introducing
 (a) Top raker (b) Rider raker
 (c) Bracings (d) Sole plate
- (viii) LEED stands for
 (a) Leadership in Energy and Environmental Design
 (b) Leadership in Environmental and Energy Design
 (c) Leaders in Energy and Environmental Design
 (d) None of the above
- (ix) GRIHA stands for
 (a) Green Rating for Integral Habitat Assessment
 (b) Green Rating for Integrated Habitat Assessment
 (c) Green Rating for Integrated Habitat Association
 (d) None of the above
- (x) Which of the following are associated with Building Services?
 (a) Fire and Safety (b) Heating
 (c) Ventilation (d) All of the above

2. (a) Write briefly about the classification of buildings based on occupancy. (8)
 (b) What do you understand by modular bricks? Show the plan views of both odd and even courses for 1 brick thick wall in English bond. (4)
 (c) Write the essential requirements of good roof. (3)
3. (a) Explain with the help of sketches, various types of shallow foundations. (9)
 (b) Explain various causes of dampness in buildings. Write the ill effects of dampness in buildings. (6)

4. What do you mean by Floor Area Ratio (FAR) and Floor Space Index (FSI). A plot is of size 15 m × 20 m. The front edge having 15 m length is connected to a road. Calculate the total no of floors that can be constructed with the following data.
- (a) Setback from front = 3m
 - (b) Setback from back and sides = 2 m
 - (c) FAR = 2
- (15)
5. What are the objectives of building bye-laws? Describe how building construction permission can be obtained in general.
- (15)
6. (a) Design a dog- legged stair for a building in which the vertical distance between the floors is 3.6 meter. The stair hall measures 2.5 m × 5 m. Assume any other data suitably. (6)
- (b) Describe the technical terms applied to doors and windows with sketches. (6)
- (c) Write the requirements of good formwork. (3)
7. (a) Write the components of a floor. (2)
- (b) Describe the component parts of scaffolding? (3)
- (c) Explain various types of mortars used for plastering and pointing. (5)
- (d) What is shoring? Explain briefly about Raking shores. (5)

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