

Total No. of printed pages = 3

CE 181304

Roll No. of candidate

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BINA CHOWDHURY CENTRAL LIBRARY
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Azara, Hatkhowapara,
Guwahati - 781017

2023

B.Tech. 3rd Semester End-Term Examination

Civil

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 (MCQ/ Fill in the blanks) : (10 × 1 = 10)

(i) Which types of building comes in group H?

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|---------------|----------------|
| (a) Hazardous | (b) Industrial |
| (c) Storage | (d) Business |

(ii) What is the name of the group institutional building was classified?

- | | |
|-------------|-------------|
| (a) Group A | (b) Group C |
| (c) Group E | (d) Group G |

(iii) The middle horizontal member of a door shutter is called

- | | |
|---------------|-----------------|
| (a) Mid rail | (b) Median rail |
| (c) Sill rail | (d) Lock rail |

(iv) Dead load comprises of

- | |
|--|
| (a) Permanently attached loads |
| (b) Temporarily attached loads |
| (c) Permanent as well as temporary loads |
| (d) Snow loads |

[Turn over

- (v) In the domain of building planning in India, NBC stands for
- (a) National Building Corporation
 - (b) National Building Code
 - (c) National Build Code
 - (d) Nominal Building Code
- (vi) HVAC stands for
- (a) Horizontal and Vertical Air Conditioning
 - (b) Heating, Ventilation and Air-Conditioning
 - (c) Heat Variable Air-Conditioning
 - (d) None of the above
- (vii) Which scaffolding is widely used in the construction of brickwork?
- (a) Suspended scaffolding
 - (b) Single scaffolding
 - (c) Trestle scaffolding
 - (d) Steel scaffolding
- (viii) 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
- (ix) Water Supply, Sewerage and drainage are integral part of building planning
- (a) True
 - (b) False
- (x) Which of the following are associated with Building Services?
- (a) Road Safety
 - (b) Street Lighting
 - (c) Ventilation
 - (d) All of the above
2. (a) Explain the situations in which the pill foundation is preferred. (3)
- (b) Write down one advantages of Gable roof over Lean - to - roof. How integral damp proofing is different from membrane damp proofing techniques? (3)
- (c) Explain the method of constructing cement concrete flooring. (3)
- (d) Explain with the help of sketches the following : (6)
- (i) Spread footing
 - (ii) Combined footing.

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3. (a) Write briefly on the principles of building planning. (5)
(b) Describe the importance of Aspect, Prospect and Privacy in building planning. (10)
4. (a) What are the objectives of building by – laws? (5)
(b) Describe stepwise how building construction permission can be obtained in general. (10)
5. (a) Write note on location of doors and window. (4)
(b) Draw a neat sketch of a staircase showing its components. (5)
(c) Design a dog - legged staircase for a residential building in which floor to floor height is 3.3 m. The size of the stair hall is limited to 2.5 m × 4.5 m. Assume any other data suitably. (6)
6. (a) What do you mean by Floor Area Ratio (FAR) and Floor Space Index (FSI)? (3)
(b) A rectangular plot is of size 50 m × 40 m. The front edge having 50 m length is connected to a road. Calculate the total no of floors that can be constructed with the following data : (12)
(i) Setback from front = 3 m
(ii) Setback from back = 2.5 m
(iii) Setback from sides = 2 m
(iv) FAR = 2.
7. (a) Explain various types of mortars used in plastering. (3)
(b) Compare timber scaffolding and steel scaffolding. (3)
(c) What is modular brick? Explain about header bond and stretcher bond in brick work. (4)
(d) Describe in brief on horizontal and vertical shores. (5)

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