

II B. Tech II Semester Regular Examinations, April - 2018
BUILDING PLANNING AND DRAWING
(Civil Engineering)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer any **THREE** Questions from **PART-A**
3. Answer any **ONE** Question from **PART-B**
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(14 × 3 = 42M)

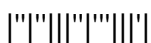
PART -A

1. a) What are building bye laws? Explain them briefly.
b) Write short notes on Floor Area Ratio (FAR), how it is related to height of the building. Explain.
2. a) Explain in detail the factors to be considered for selection of a site for a residential building
b) On what considerations, the grouping of various units in residential buildings is made?
3. a) What are the minimum standards of various parts of Hospital and Dispensaries?
b) Discuss the principles of planning of school building.
4. Explain about the Recreation buildings.
5. a) Write the limitations of Built up area
b) What are the lightening and ventilation requirements in an auditorium

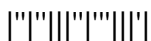
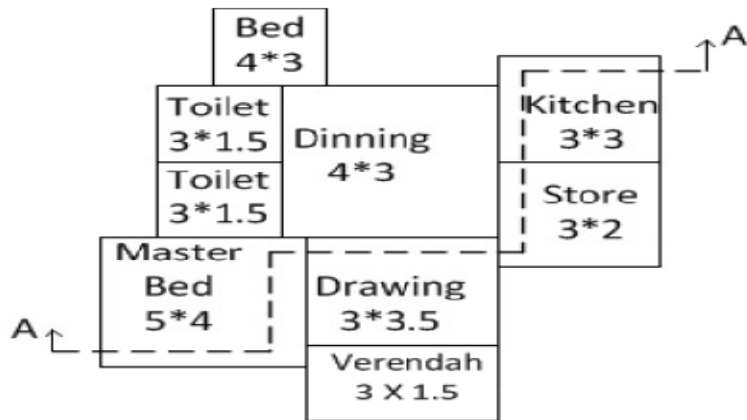
PART -B

(1 × 28 = 28M)

6. a) Draw a neat sketch of an odd and even course of English Bond for a one and half brick wall.
b) Draw three different types of commonly used doors and identifying different components in doors



7. The line diagram for a plan of a residential building is provided below:
Draw a neat diagram of the plan and section AA of the same
Assume all data required as per the standard dimensions



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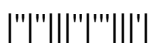
PART -A

1. Explain different factors that affect the site selection for a residential building.
2. What do you mean by Byelaws? Explain them in detail along with their objectives and underlying principles.
3. What do you mean by grouping? Explain its significance in the planning of residential buildings along with neat sketches.
4. How the planning of a public building differs from planning of a residential building? Explain the key factors to be considered in the design of an educational institution.
5. What are the Land scaping requirements? Explain briefly.

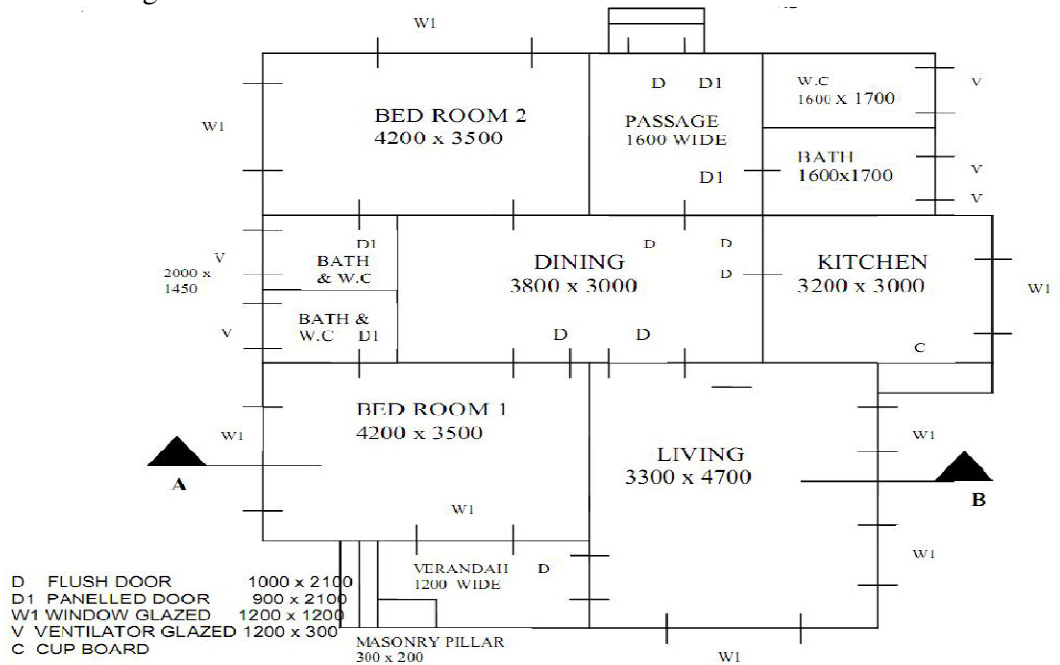
PART -B

(1 × 28 = 28M)

6. a) Draw conventional signs for the following materials:
 - (i) Brick.
 - (ii) Concrete.
 - (iii) Wood.
 - (iv) Stone.
 - (v) Earth.
- b) Draw to a suitable scale the front elevation of a King post truss indicating all details for a clear opening of 8000 mm.



- 7 a) The line sketch of the plan of a residential building is shown in figure below. Draw:
- A neat dimensioned plan.
 - Sectional elevation along AB, to a suitable scale, using the following specification.
- Specifications: Foundations: C.C 1:4:8 800 mm wide and 300 mm thick.
 Footings: Rubble stone masonry: 600 mm x 500 mm.
 Basement: Coursed rubble masonry: 400 mm wide and 700 mm high.
 Superstructure: Brickwork in C.M 1.5:300 mm wide and 300 mm high.
 R.O.C roofing: 100mm thick



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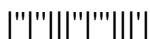
PART -A

1. Classify the buildings based on occupancy and type of construction.
2.
 - a) Describe the objectives of Building bye-laws.
 - b) On what considerations, the grouping of various units in residential buildings is made?
3. Describe the important departments and facilities to be provided in the layout of a general hospital.
4. What are the requirements to be considered in planning of Industrial building
5. Explain the facilities to be provided for hotels and motels

PART -B

(1 × 28 = 28M)

6.
 - a) Draw the neat dimensioned sketch of a King Post Truss
 - b) Draw plans of Flemish bond with all the details.
7. A house of plinth area about 35 Sqm is to be located in a plot of 10 m x 12 m. The shorter side is parallel to road running in East-West direction, with plot on Southern side of the road. The following rooms are required: One bed room, Drawing room, Kitchen, Bath and WC. Draw line plane and plan of building



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**(14 × 3 = 42M)****PART -A**

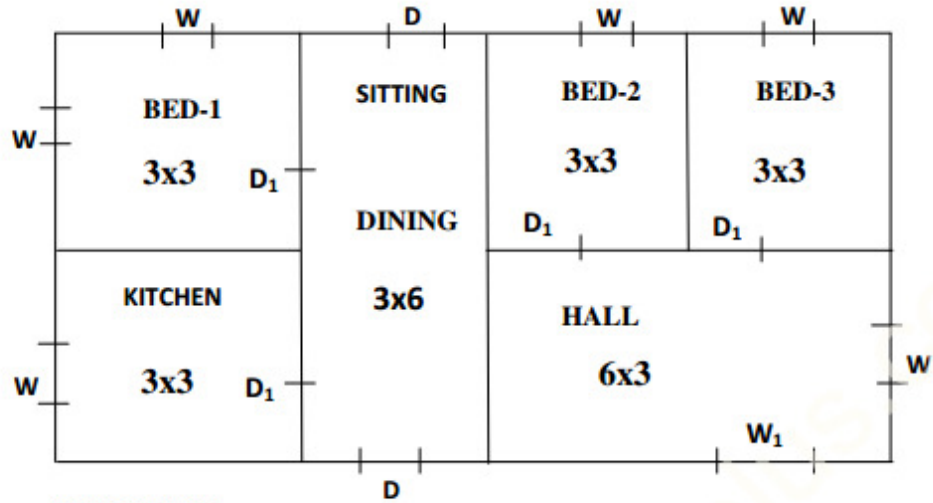
1. Explain the building byelaws with reference to open space requirements and plinth area requirements.
2. On what considerations, the grouping of various units in residential buildings is made? Write short notes on Floor Area Ratio (FAR). Explain how it is related to height of the building.
3. Discuss about the usual requirements of a residential building.
4.
  - a) Write short notes on grouping of buildings.
  - b) What are the factors to be considered in the design of a bank building?
5.
  - a) Classify doors. Explain about any four type of doors
  - b) Clearly differentiate between King post and Queen post truss? Explain different features

**PART -B****(1 × 28 = 28M)**

6.
  - a) Draw the plans of Flemish bond odd and even courses of one and half brick walls in thickness at the junction of a corner
  - b) Draw the elevation of a glazed window of size 1000 mm x 1450 mm



7. Draw Plan and Sectional elevation for the LINE diagram given below (Fig). Assume suitable Foundation details.



**REFERENCE:-**

D-1000X2000 mm; D<sub>1</sub>-900X2000 mm; W-900X1200 mm; W<sub>1</sub>-2000X1000 mm;  
V-800X300 mm; All dimensions of rooms are in m