SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code : Building Planning & Drawing (16CE110) **Course & Branch**: B.Tech - CE

Year & Sem: II-B.Tech & II-Sem **Regulation:** R16

UNIT –I

PLANNING OF BUILDINGS & BUILDING BYE LAWS

1. Explain the term building? Explain the various types of buildings? **[10M]**
2. Explain the various types of residential buildings with neat sketches? **[10M]**
3. What are the various factors to be considered in selecting a site for residential building? **[10M]**
4. Explain the following terms: **[10M]**
   a) Orientation of a building
   b) Aspect
   c) Prospect
   d) Privacy
   e) Economy
5. Explain the following terms: **[10M]**
   a) Furniture requirement
   b) Grouping
   c) Circulation
   d) Sanitation
   e) Lighting
6. Explain the terminology in building bye laws? Mention the objectives of building byelaws? **[10M]**
7. Explain the following terms: **[10M]**
   a) Minimum plot sizes
   b) Open space requirements
   c) Plinth area, floor area and carpet area
   d) Floor area ratio
   e) Floor space index
8. Enumerate the basic principles underlying building byelaws and also limitations for the built up area? **[10M]**
9. Explain the following: **[10M]**
   a) Height of the building
   b) Wall thickness
   c) Lighting and ventilation requirement
   d) Safety from fire
   e) Drainage and sanitation
10. a) Explain the applicability of the bye-laws in the present day construction? **[6M]**
    b) Write short notes on detached house. **[4M]**

UNIT –II

PLANNING OF RESIDENTIAL AND PUBLIC BUILDINGS

1. What are the requirements for the following rooms in planning of residential building?
   a) Dining room b) Drawing room c) Kitchen d) Bedroom **[10M]**
2. (a) Explain the characteristics of various types of residential buildings? **[5M]**
   (b) Write short notes on requirements of office building. **[5M]**
3. (a) Discuss about the usual requirements of a hotel building. **[5M]**
   (b) Briefly explain the components of a bus station. **[5M]**
4. What are the various rooms provided in residential building and explain it briefly? **[10M]**
5. Briefly explain in detail about the various components of a hostel. **[10M]**
6. Describe the important departments and facilities to be provided in the layout of hospital building? **[10M]**
7. What are the factors to be considered in the design of a bank building? Explain **[10M]**
8. (a) How do the planning of a public building differs from planning of a residential building? **[5M]**
   (b) Explain the key factors to be considered in the design of an educational institution. **[5M]**
9. (a) Explain the different principles used while planning an industrial buildings in an industrial area. **[5M]**
   (b) Draw a rough plan of an educational building in a town. **[5M]**
10. (a) Describe the various types of hospital. **[4M]**
    (b) Explain in detail about the requirement of (i) Bath & WC (ii) Sick room in residential building. **[6M]**

UNIT –III

BUILDINGS: SAFETY & COMFORT

1. Mention the different aspects of building safety. Explain each of them in detail. **[10M]**
2. Write short notes on **[10M]**
   a) Structural safety b) Fire safety c) Constructional safety
3. Give a detailed note on noise and acoustic comfort. How do you design a building for thermal comfort? **[10M]**
4. Explain the components of building automation system? **[10M]**
   a) HVAC b) Electrical lighting
5. Explain the following terms: **[10M]**
   a) Design for thermal comfort b) Ventilation comfort
6. Briefly explain in detail about the various fire safety aids adopted in building. **[10M]**
7. Explain the components of building automation system? **[10M]**
   a) Security b) Fire-fighting c) Communication
8. Explain the following terms: **[10M]**
   a) Air conditioning comfort b) Lighting comfort c) Noise and Acoustic comfort
9. Give a detailed note on ventilation comfort? Explain the design for ventilation comfort? **[10M]**
10. Write short note on components of building automation system? **[10M]**

UNIT –IV

SIGN CONVENTIONS AND BONDS

1. Draw the conventional signs for the following: **[10M]**

   a) Concrete b) Stone c) Plaster d) Sand filling

2. Draw the conventional signs for the following: **[10M]**

   a) Glass b) Brick c) Copper alloys d) Aluminium alloys

3. Draw the conventional signs for the following: **[10M]**

   a) Lead b) Sand c) Clay tile d) Earth

4. Draw a neat sketch of an odd and even course of English Bond for a one and half brick wall. **[10M]**

5. Draw the front elevation and sectional plan of a paneled with glazed door to fit in an opening of 1000 mm x 2100 mm and label the parts. **[10M]**

6. Draw to suitable scale the front elevation of Queen post truss indicating all details for a clear opening of 7000 mm. **[10M]**

7. Draw the front elevation and sectional plan of a paneled window to fit in an opening of 1200 mm x 1200 mm and label the parts. **[10M]**

8. Draw a neat sketch of an odd and even course of Flemish bond for a one brick wall. **[10M]**

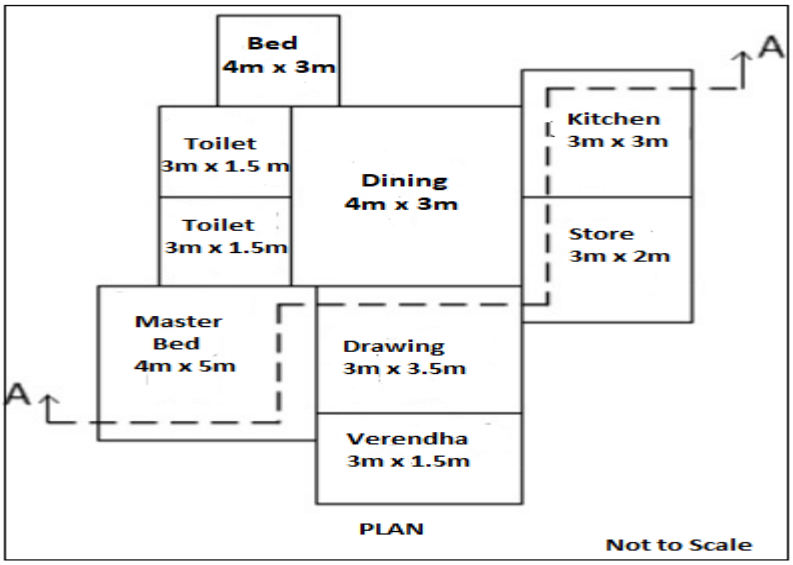
9. Draw a neat sketch for the following: **[10M]**

   a) Couple roof b) Collar roof

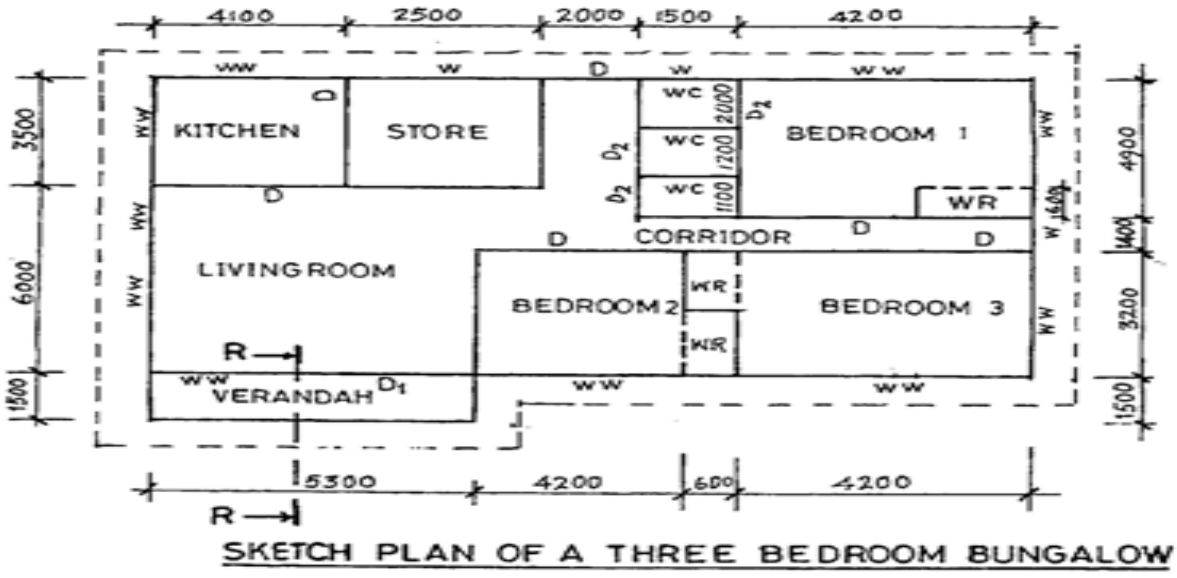
10. Draw to a suitable scale the front elevation of a King post truss indicating all details for a clear opening of 5000 mm. **[10M]**

UNIT –V

1. The line diagram for a plan of a residential building is provided below: [2**0M]**
   Draw a neat diagram of the plan and section AA of the same. Assume all data required as per the standard dimensions.



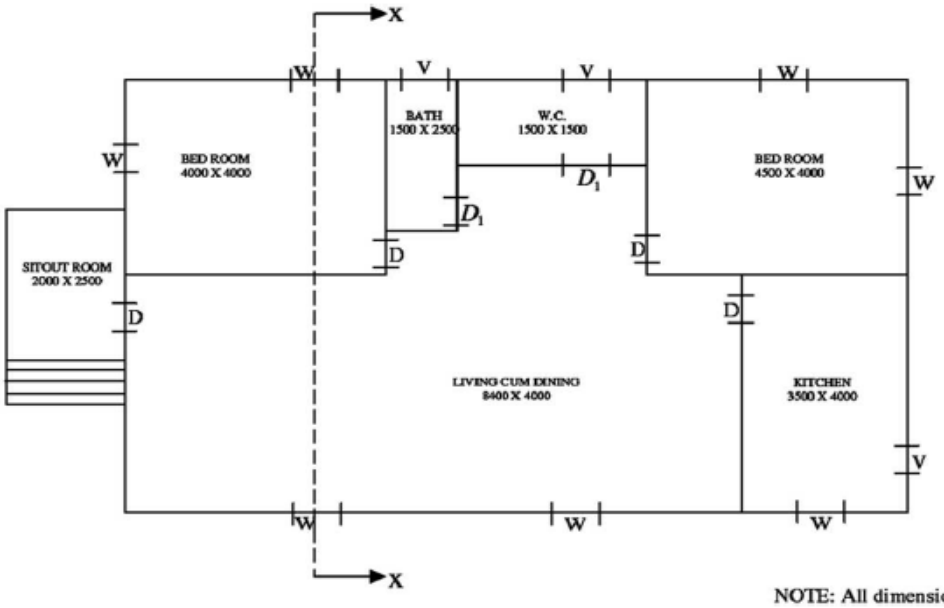
2. Figure shown below gives the line drawing of a residential building, draw to a scale of the following: (a) Plan. (b) Section along AB. (c) Front elevation. **[20M]**
   The following specifications are to be adopted:
   Foundation: Depth 1000 mm. C.C bed 1000 mm x 300 mm.
   Two footings with an offset of 50 mm and 250 mm thickness each.
   Basement: 600 mm high, thickness of wall at this level is 400 mm.
   Walls: Brick masonry in C.M.1:6, 300mm thick
   Roof: R.C.C slab 120mm thick.
   Provide the details of doors, windows, ventilators and steps etc. as per standard dimensions.



SKETCH PLAN OF A THREE BEDROOM BUNGALOW

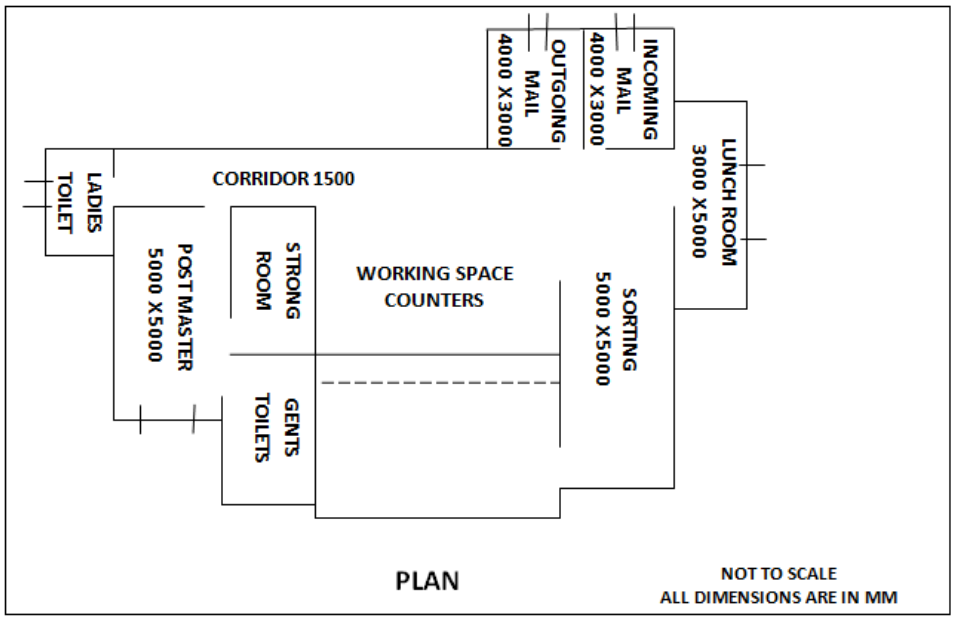
(Assume suitable dimensions where necessary)

3. The line sketch of a residential building is shown in figure below: Draw
   (a) A neat dimensioned plan. **[20M]**
   (b) Sectional elevation along AB, to a suitable scale, using the following specification.
   Specifications: Foundations: CC 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.

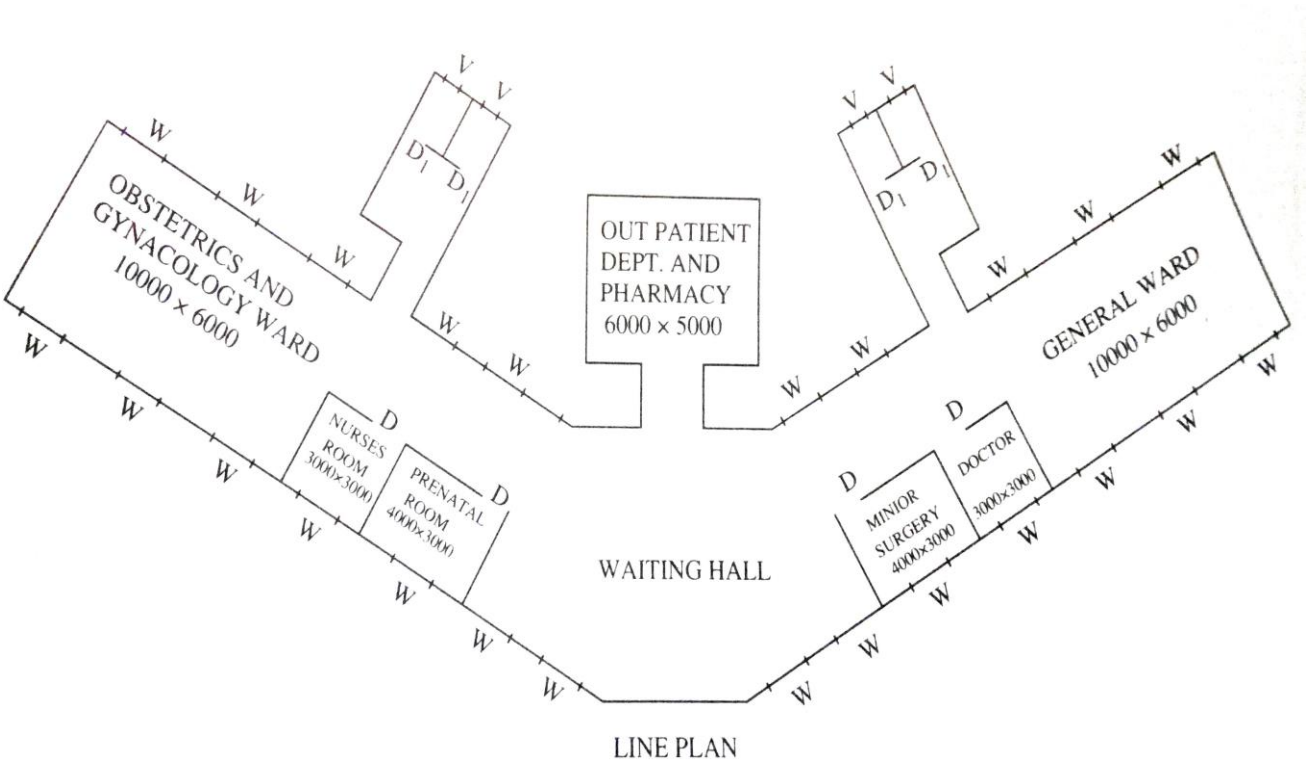


NOTE: All dimensions are in mm.

4. Draw plan, section and elevation for the following line drawing: **[20M]**
   (Provide standard dimensions for doors, windows and ventilation)



5. Draw plan, section and elevation for the following line drawing: **[20M]**
(Provide standard dimensions for doors, windows and ventilation)



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