

II B.Tech II Semester (R09) Regular & Supplementary April/May 2012 Examinations
BUILDING PLANNING & DRAWING
(Civil Engineering)

Time: 3 hours

Max Marks: 70

Part - A

(Answer any three questions, 3x14=42 M)

1. (a) What are the objectives of building bye-laws and when do you apply the building bye-laws?
(b) Write short notes on:-
(a) Building bye-laws for lighting and ventilation.
(b) Building bye-laws for offsets.
2. (a) Why do you need more ventilation in kitchen than in living rooms or bed rooms? Justify your answer with standards of building specification.
(b) Define the plan of a building. What are the factors affect the planning of a residential building.
3. (a) Give the classification of buildings as per national building code(NBC) and explain.
(b) Describe the important departments and facilities to be provided in the layout of a educational institutions.
4. (a) Differentiate clearly between PERT and CPM network methods.
(b) What are the features of network planning? Why do we use network planning? Explain in detail.
5. (a) Draw the conventional signs of
(a) Door (b) Glass (c) Earth (d) W.C.
(b) Draw the isometric view of a right angle junction of a one and a half brick wall in Flemish bond, showing at least four consecutive layers.

Part - B

(Answer any one question, 1x28=28 M)

6. Draw to a suitable scale the front elevation of a king post truss indicating all details for a clear opening of 8000 mm.
Draw the front elevation and sectional plan of a half glazed paneled door to fit in an opening of 1000 mm x 1900 mm and label the parts.
7. Draw the plan section and elevation of a residential building with the help of the data given below to a scale of 1:50.
 - (i) Living room with staircase facilities to terrace-1.
 - (ii) Dining room-1
 - (iii) Bed room with bath cum W.C-2
 - (iv) Children bed room-1
 - (v) Kitchen -1
 - (vi) Separate bath and W.C.
 - (vii) Reading room-1
 - (viii) Store room-1.
 - (ix) Open to sky.Climate zone: hot and humid
Wind direction: S-SW-W.
The plinth area shall not exceed 130 sq.m.
Calculate the exact plinth area provided.

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1. (a) Write short notes on:-
 - (i) F.S.I.
 - (ii) F.A.R.
- (b) Write short notes on building bye-laws. What are the merits and demerits of building bye-laws.
2. (a) Describe the various types of residential buildings.
- (b) What orientation would you suggest for locating a building in?
 - (i) East coast city such as Chennai.
 - (ii) West coast city such as Mumbai.
 - (iii) Hot, dry city such as Tirupati.
3. (a) Differentiate between the following:
 - (i) Dispensary and Clinic.
 - (ii) Hotel and Motel.
 - (iii) Auditorium and Foyer.
- (b) List out and detail the facilities to be provided in the layout of a bank.
4. (a) Define the following:-
 - (i) Activity.
 - (ii) Arrow.
 - (iii) Interfering float.
 - (iv) Optimum time estimate.
- (b) What is meant by BAR CHART and what are the limitations of a bar chart. Explain with an example.
5. (a) Draw neat sketches to represent the following in building drawings:
 - (i) U.R.C.S. masonry.
 - (ii) Glass.
 - (iii) Sandy soil.
 - (iv) R.C.C. Work.
- (b) Draw the isometric view of a right angle junction of a one and half brick wall in English bond. Showing at least four consecutive layers.

Part - B

(Answer any one question, 1x28=28 M)

6. (a) Draw the front elevation and sectional plan of a paneled door to fit in an opening of 1000 mmx1900mm and label the parts
- (b) Draw to a suitable scale the elevation and details of a queen post truss of span 14000 mm. Assume suitable dimensional of the components and indicate all the details.

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7. Draw the plan of a educational building showing the following requirements to scale following bye-laws and specify the dimensions of each element in a tabular form.
- (i) Class rooms-14.
 - (ii) Administrative area-1.
 - (iii) Assembly hall-1.
 - (iv) Library-1.
 - (v) Laboratories-2.
 - (vi) Reading room-1.
 - (vii) Stock room-1.
 - (viii) Toilets-2.
 - (ix) Drinking water-2.
 - (x) Stair case rooms-2.
 - (xi) Staff rooms-2.
 - (xii) Waiting halls-1.
 - (xiii) Canteen -1.
 - (xiv) Open to sky space.
 - (xv) Ground (indoor & outdoor)

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Part - A

(Answer any three questions, 3x14=42 M)

1. (a) Write short notes on floor area ratio. How it is related to height of the building, explain and differentiate floor area ratio with carpet area.
(b) Write short notes on:-
 - (a) Building bye-laws for frontage and open space in buildings.
 - (b) Buildings bye-laws for size of rooms and ventilation.
2. (a) Explain how you will select a site for the construction of a residential building.
(b) Explain the characteristics of the directions briefly.
3. (a) What are the minimum standards for various parts of building as per national building code (NBC) and explain?
(b) Describe the important departments and facilities to be provided in the layout of a industry.
4. (a) Write short notes on modern methods in construction management.
(b) Draw the diagrams showing activity oriented network and event oriented network to the mass concreting for foundation.
5. (a) Draw the conventional signs of
 - (a) Ventilator.
 - (b) Timber.
 - (c) Ground level.
 - (d) Wash basin.
(b) Draw the isometric view of a right angle junction of a two brick wall in Flemish bond, showing at least four consecutive layers.

Part - B

(Answer any one question, 1x28=28 M)

6. (a) Draw to a suitable scale the front elevation of a king post truss indicating all details for a clear opening of 7500 mm.
(b) Draw the front elevation and sectional plan of a half glazed paneled door with swing ventilator to fit in an opening of 1200 mmx2100 mm and label the parts.
7. Draw the plan section and elevation of hotel building with the help of the data given below to a scale of 1:50.
 - (i) Entrance foyer-1.
 - (ii) Reception room-1.
 - (iii) Public rooms-1.
 - (iv) Bed rooms with bath cum W.C-14.
 - (v) Kitchen-1.
 - (vi) Sanitary units-1.
 - (vii) Laundry-1.
 - (viii) Store room-1.
 - (ix) Open to sky.

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Part - A

(Answer any three questions, 3x14=42 M)

1. (a) Explain the building bye-laws with reference to
 - (1) Open space requirements.
 - (2) Plinth area regulations.
 - (3) Height limitations.(b) What is the difference between law and bye-laws and write a short note on applicability of the bye-laws?
2. (a) Describe the requirements of different rooms and their grouping in residential buildings.
(b) What is a sun path diagram? Give C.B.R.I. (Central building research institute) recommendations for obtaining optimum orientation of a building?
3. (a) List out and detail the facilities to be provided in the layout of a industrial building.
(b) List out and detail the facilities to be provided in the layout of a building used for recreation.
4. (a) What are the stages of a construction project and construction management team explain by using flow charts?
(b) Define the following:
 - (i) Slack time.
 - (ii) Interfering float.
 - (iii) Backward pass.
 - (iv) L.F.T.
5. (a) Draw neat sketches to represent the following in building drawings:
 - (i) Brick masonry.
 - (ii) Cast iron.
 - (iii) Steel.
 - (iv) Window.(b) Draw the isometric view of a right angle junction of a two half brick wall in English bond, showing at least four consecutive layers.

Part - B

(Answer any one question, 1x28=28 M)

6. (a) Draw the front elevation and sectional plan of a paneled door with swing ventilator to fit in an opening of 1000 mmX2100 mm and label the parts.
(b) Draw to suitable scale the elevation and details of a queen post truss of span 12000 mm. Assume suitable dimensions of the components and indicate all the details.

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7. Draw the plan of a bank building showing the following requirements to scale following bye-laws and specify the dimensions of each element in a tabular form.
- (i) Public space with counter.
 - (ii) Manager's room.
 - (iii) Meeting hall.
 - (iv) Safe deposit locker and strong room.
 - (v) Records room.
 - (vi) Store room.
 - (vii) Working space.
 - (viii) Toilets.
 - (ix) Recreation room.
 - (x) Fire safety unit.
 - (xi) Guard room.
 - (xii) A.T.M.
 - (xiii) Drinking water unit.

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