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Roll No. ....

CE/FT–305(N)

B. E. (Third Semester) EXAMINATION, June, 2010

(New Scheme)

(Common for CE & FT Engg. Branch)

BUILDING DESIGN AND DRAWING

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Answer all questions. There is internal choice within each question. Answer should be precise and to the point only. Whenever necessary the answer should be supported with examples and neat sketches. Assume suitable data if necessary and state them clearly.

1. (a) Explain with the help of sketches Grilage foundation and Raft foundation.   12

   (b) What are the functions of lintels and arches ? Explain reinforced concrete lintels.   8

Or

2. (a) Draw the sketch of the sky light and state where it is generally used.   5

   (b) Describe briefly the type of floor used for different types of buildings and state the reasons for their choice. Give detailed specifications for coloured terrazzo flooring.   15

P. T. O.

3. (a) What are the objectives of building bye-laws ?   5

   (b) What are various principles of planning building and explain :   15

      (i) Privacy

      (ii) Roominess

      (iii) Aspect

Or

4. (a) What do you understand by :   5

      (i) Building line

      (ii) Set-back

      (iii) Control line

   (b) What are the principles of architectural composition ? Explain :   15

      (i) Proportion

      (ii) Unity

      (iii) Contrast

5. Write brief notes as per National building code provisions on building services of :   20

   (a) Ventilation

   (b) Lighting

   (c) Fire safety

   (d) Acoustics of buildings

Or

6. Draw the parallel perspective of a rectangular prism $4 \times 3 \times 2$ cm lying on one of its rectangular faces on H. P. with one of its vertical face making an angle of 45° with V. P. The P. P. is at a distance of $2 \cdot 50$ cm from the nearest corner of the object. The station point is at a distance of 6 cm. and above H. P.   20

7. A single storey residential building is to be planned on a given plot consisting essentially of :

(i) A living cum dining room

(ii) Two bed rooms

(iii) A front verandah

(iv) A kitchen with store

All other provisions such as sanitary units, built in cupboards, loft etc. may be suitably provided. Given :

(a) Plot area = 140 sq. m.

(b) Good foundation is available at $1 \cdot 0$ m below ground level.

Draw

(a) Plan of residential building. 30

(b) Sectional elevation showing maximum details. 10

Or

8. A single storey primary school is to be planned for a village having the following requirements :

(i) Six classrooms accommodating 50 students in each classroom

(ii) Computer laboratory accommodating 25 students

(iii) Principal office

(iv) Staff room for 5 teachers

(v) Office cum store

All other provisions such as entrance, verandah, separate sanitary units for boys and girls etc. may be suitably provided. Draw :

(a) Plan of school building. 30

(b) Elevation of school building. 10

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