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Seat No.	
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**[5152]-507**

**S.E. (Civil) (II Sem.) EXAMINATION, 2017**  
**ARCHITECTURAL PLANNING AND DESIGN OF BUILDINGS**  
**(2015 PATTERN)**

**Time : Two Hours**

**Maximum Marks : 50**

- N.B. :—** (i) Solve Q. No. 1 or Q. No. 2, Q. No. 3 or Q. No. 4  
on the answer-sheet.  
(ii) Solve Q. No. 5 or Q. No. 6, Q. No. 7 or Q. No. 8  
on the drawing sheet only.  
(iii) Assume suitable data, if necessary.  
(iv) Figures to the right indicate full marks.

1. (a) Write a short note on TDR. Who is eligible for TDR and enlist  
the documents required for TDR ? [7]  
(b) Write short notes on : [6]  
(i) Green roofing  
(ii) Cost effective housing.

*Or*

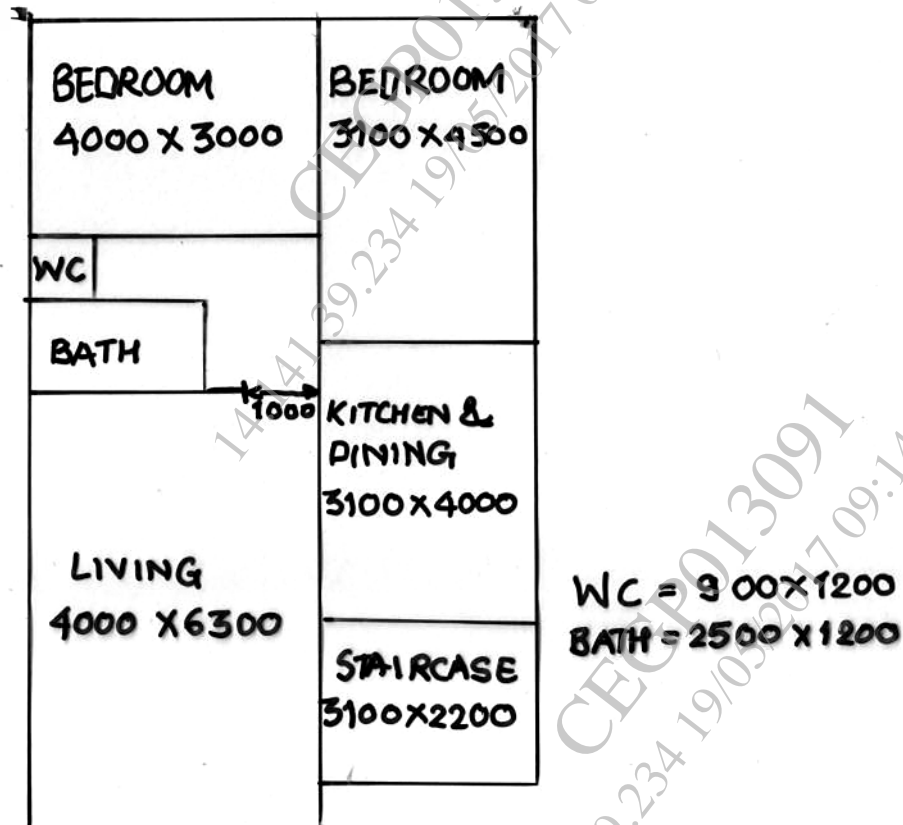
2. (a) Write a short note on NOC from roads, National and State  
Highways. Which documents are required for application ? [7]  
(b) Explain the following principle of architectural planning with  
sketches : [6]  
(i) Unity  
(ii) Composition.

P.T.O.

3. (a) What do you mean by perspective drawing ? What are the objectives of perspective drawing ? [7]
- (b) Write short notes on : [6]
- (i) Reverberation and Sabine's expression
- (ii) Formation of echoes.

Or

4. (a) Write short notes on : [7]
- (i) Winter air conditioning system
- (ii) Summer air conditioning system.
- (b) Write a short note on One pipe system and Two pipe system of plumbing. [6]
5. Draw a detailed plan to a scale of 1 : 50 or suitable for line plan shown in fig. [13]



Refer the following guidelines

- (i) The structure is RCC framed structure.
- (ii) Wall thickness : External – 230 mm, Internal – 100 mm
- (iii) Assume suitable size of doors and windows
- (iv) Access to the terrace is provided through staircase
- (v) Floor to floor height – 3240 mm
- (vi) Plinth height – 600 mm
- (vii) All the dimensions are in mm
- (viii) Tread – 250 mm  
Riser – 180 mm

Or

6. Draw to a scale 1 : 50 or suitable, detailed plan of a bungalow for the following conditions : [13]

- (i) Living room 1 no – 18 m<sup>2</sup> approx.
- (ii) Kitchen cum dining – 12 m<sup>2</sup> approx.
- (iii) Master bedroom (inclusive of toilet) – 18 m<sup>2</sup> approx.
- (iv) Guest room – 12 m<sup>2</sup>
- (v) Study room – 12 m<sup>2</sup>
- (vi) 1 separate WC and bath
- (vii) Passage – 1.2 m wide
- (viii) Floor to floor height – 3.0 m
- (ix) RCC framed structure
- (x) Plinth height – 600 mm
- (xi) Provide suitable staircase

7. Design a primary school for 5 classrooms, the building is single storied and is RCC framed structure. The following units are be provided : [12]

- (i) Number of students per classroom – 40
- (ii) Primary classroom – 50 m<sup>2</sup>
- (iii) Drawing room – 75 m<sup>2</sup>
- (iv) Headmasters room – 15 m<sup>2</sup>
- (v) Administrative office – 30 m<sup>2</sup>
- (vi) Common staff room – 60 m<sup>2</sup>
- (vii) Medical unit – 30 m<sup>2</sup>
- (viii) Book store – 15 m<sup>2</sup>
- (ix) Sanitary block (Ladies and gents) : suitable no.

Draw to a scale of 1 : 50 or suitable, line plan with North line.

Or

8. Design a Rest House for 6 rooms, the building is single storied and RCC framed structure. The following units are to be provided : [12]

- (i) Bedroom with attached toilet :
  - (a) Bedroom – 12 m<sup>2</sup>
  - (b) Toilet – 3 m<sup>2</sup>
- (ii) Circulation space verandah – 2 m wide
- (iii) Dining hall – 20 m<sup>2</sup>
- (iv) Kitchen – 12 m<sup>2</sup>
- (v) Store – 6 m<sup>2</sup>
- (vi) Office – 12 m<sup>2</sup>
- (vii) Sanitary block (Ladies and gents) – Suitable no.

Draw to a suitable scale line plan with North direction.