



SD-6101

B. Arch - II (Sem - III) Examination

May / June - 2011

ARC - 302 : Building Material & Construction - III
(New Course)

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दशांशिक निशान्तीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. Arch - 2 (Sem - 3)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Building Material & Construction - 3 (New)"/>	<input type="text"/>
Subject Code No. : <input type="text" value="6"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="1"/>	<input type="text"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	
	Student's Signature

- (2) Figures to the right indicate full marks.
- (3) All questions have to be attempted in **one** answer sheet only.
- (4) Support your answers with neat and clean sketches wherever necessary.

1 (a) Answer in brief : 10

- (1) What is the difference between solid core ground floor and suspended ground floor ?
- (2) What is the significance of purlin in a double roof system ?
- (3) What is a two way concrete floor ?
- (4) Enlist various floor covering materials.
- (5) What is the significance of eave end ?

(b) Draw illustrated sketches : 10

- (1) King post roof truss
- (2) Two way beam system in steel floors
- (3) Couple close roof
- (4) Connections in precast concrete floor units
- (5) Typical section of a toilet slab.

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[Contd...

- 2** (a) Explain following terms : **10**
- (1) Light weight concrete
 - (2) Air entrant concrete
 - (3) Pumpcrete
 - (4) M20
 - (5) Admixtures.
- (b) Fill in the blanks : **10**
- (1) Cast in situ concrete floors are cast on _____ or _____ shuttering.
 - (2) In triple joist timber floors, the binders are connected to _____.
 - (3) In composite floors, steel framing supports _____ or _____.
 - (4) _____ is defined as the apex line of the pitched roof.
 - (5) Single roofs consist of only _____.
 - (6) Common rafters are connected to _____ at their top end and _____ at their bottom end.
 - (7) Queen post roof truss is suitable for span upto _____ m.
- 3** Attempt any **two** : **20**
- (1) What are the advantages of structural steel frame floors ? Explain three typical systems of steel frame floors.
 - (2) Explain jack arch floor in detail.
 - (3) Give comparison between cast in situ concrete floors and precast concrete floors, with reference to their suitability and system of construction.
- 4** Attempt any **two** : **20**
- (1) Explain triple roof system in detail. Enlist its typological variations.
 - (2) Enlist, draw and define various components of pitched roofs.
 - (3) Suggest an appropriate roof system for a canteen area of 15 m × 9 m, with material and construction detail. Show roof plan, relevant sections and details to explain your suggestion.

- 5** Write short notes on : (any **four**) **20**
- (1) Field test for concrete
 - (2) Concreting in cold weather
 - (3) Impact of roof framing in selection of roof covering material
 - (4) Waffle slabs and its suitability
 - (5) Composite roof trusses.
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