



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 दृष्टावेक निशानीवाणी 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.

- 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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