

B.Arch. (Sem.-II) Examination

AR 202 Construction-II

May-2017

Time : 3 Hours]

[Max. Marks : 100

(ATKT) Jya-matrix Syllabus

- Instruction:
1. Assume suitable data if necessary.
 2. Neat proportionate sketches are necessary to explain theories.
 3. Figures to the right indicate full marks.

- Q-1 a) Draw a segmental arch of span of 4 mt and show all of its elements with proper terminology and detail description of each (15)
- OR**
- Draw an arch having 3 center and label basic terms over an opening with 1.5m width and 2.1m height
- b) What is lintel? Sketch 3 different types of lintel (15)
- Q-2 (a) Explain market forms of timber (any 5) :- (15)
- i. Plywood
 - ii. Veneer
 - iii. Laminate
 - iv. Softwood
 - v. Hardwood
 - vi. MDF
- (b) Explain bamboo as a material for construction? (10)
- (c) Write a short note on vernacular and contemporary flooring and its material (10)
- Q-3 Do as directed (any 3) (15)
- (a) Explain difference between brick lintel and stone lintel with neat sketches
 - (b) Explain the reason of using queen closer near stopped end conditions while constructing brick masonry wall
 - (c) Thermal insulation of building and its advantages
 - (d) Explain through sketches Mud block construction
- Q-4 (a) Sketch 6 different types of lengthening joints & 2 type of widening joints (10)
- (b) Draw ashlar stone masonry of wall thickness 300mm (10)

B.Arch.-I (Sem.-II) Examination
202 AR Building Construction-II
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- Instruction: 1. Figures to the right indicate full marks.
2. Assume suitable data, scale if necessary.
3. Neat proportionate sketches are necessary to explain theories.

Q-1 (a) Explain through sketches the different types of timber floors and roofs. (15)

OR

(a) Draw a plan of single joist and double joist timber floor with all construction details.

Q-2 Attempt with proportionate neat sketches. (Attempt any five). (30)

- (a) Explain stability of arches.
(b) What is the structural difference between arches and lintels explain with sketches.
(c) Explain cement as building material.
(d) Explain various types of building materials used in masonry work.
(e) Explain load bearing wall, cavity wall and partition wall with neat sketches and with all definitions.
(f) Explain all construction details for timber floor with sketches.
(g) Explain timber king post roof and queen post roof truss details with sketches.

Q-3 (a) Explain different types of bond in brick masonry with neat sketches. (20)
(Show course plans, elevation for all bonds).

OR

(a) Explain different types of stone masonry with neat sketches. (20)

Q-4 Answer the following.

- (a) Explain different type of arches with sketches according to shape and number of centre. (15)
(b) Draw brick masonry wall section with detail in appropriate scale, show foundation, sill, lintel, weather shed, and parapet wall detail. (20)

B.Arch. (Sem.-II) Examination
AR 203 NS Building Construction-II
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- Instructions:** (1) Figures to the right indicate full marks.
 (2) Assume suitable data, if necessary.
 (3) Neat proportionate sketches are necessary to explain theories.

- Q-1 Draw a section of a timber truss roof for a span of 3000 mm, showing structural members with roof covering materials. Give enlarged details of any three of the following: 30
- Tie beam with king post
 - Tie beam with principal rafter
 - Ridge and common rafter
 - Laying of Mangalore tiles with battens

OR

- Q-1 Draft a timber single ground floor for a dance hall having size of 3500 mm x 5500 mm. Consider joist size 65 mm x 125 mm depth. Distance between the two joists is 600 mm. Show appropriate details of this floor with plan and sections. (Use 1:20 scale for drafting) 30
- Q-2 Explain sources of dampness in buildings and its preventive measures. Sketch appropriate damp proofing details at all building conditions. 20
- Q-3 Draw a semicircular arch of a span of 4.5 mts and show all of its elements with proper terminology and detailed description of each. 20
- Q-4 What is pile foundation? What are the types of Pile foundations? Explain with neat sketches any two types of pile foundations. 15
- Q-5 Differentiate between the following: (any 3) 15
- Hipped roof and Gabled roof
 - Rough brick arch and Gauged brick arch
 - Strip footing and Isolated column footing
 - Joist and beam
 - Lintel and arch