



Seat No. _____

HO-1901390201020400

First Year B. A. (ID) (Sem. II) Examination

April – 2023

Materials & Construction-II

Time : 3 Hours / Total Marks : 50

Instructions :

- (1) All questions are compulsory.
- (2) Any ambiguity will be considered as a wrong answer.

1 (a) Choose the correct answer : **5**

- (1) _____ is the highest central wedge shaped block of an arch.
(A) voussoir (B) Riser
(C) Key Stone (D) Skew Back
- (2) Medium carbon steels are _____ than Low carbon steel.
(A) Tougher (B) Softer
(C) Hardest (D) Smoother
- (3) _____ is the area enclosed between the rails.
(A) Horn (B) Stile
(C) Panel (D) Door
- (4) The entire assembly of styles, panels and rails is known as _____.
(A) Window (B) Door
(C) Opening (D) Shutter
- (5) Mullion is _____ member employed to sub divide a window or door opening vertically.
(A) Vertical
(B) Horizontal
(C) Inclined at 60°
(D) Inclined at 45°

- (b) Mark the following true or false : 5
- (1) Stone arches can be constructed in rubble masonry or ashlar masonry.
 - (2) Trefoil arch is two centered arch.
 - (3) Aluminium is an example of ferrous metals.
 - (4) The most common type of door is Single swing door.
 - (5) Gable roof slopes is in two directions.
- 2 Answer the following questions : (Any Two) 10
- (1) Sketch different types of roofs (Any ten).
 - (2) Difference between wooden door and aluminium door.
 - (3) Explain types of opening and its solutions.
 - (4) Draw 5 types of arches and label the terms in any one of them.
- 3 Design a Howe truss for the span of 6.0m clear distance from wall to wall. Draw front view of the Truss with all the elements and components including Manglore tiles, also draw any Three junction details in sketch Consider wall thickness of 0.23m. (Scale - 1:20). 15
- OR**
- Design a Queen post truss for the span of 6.0m clear distance from wall to wall. Draw front view of the Truss with all the elements and components including Manglore tiles, also draw any Three junction details in sketch. Consider wall thickness of 0.23m (Scale - 1:20).
- 4 Design a Panel door for the front door of a house with two shutters. 15
The dimension of opening is 1.35m x 2.1m. Consider wall thickness is 0.23m. Material for door shall be combination of wood and glass. Draw the plan and elevation for same, also mention all the elements. (Scale - 1:10).
- OR**
- Design a casement window for Residence. The dimension of opening is 0.9m x 1.2m. Consider wall thickness is 0.23m. Material for window shall combination of wood and glass. Draw the plan and elevation for same, also mention all the elements. (Scale - 1:10).