

SARVAJANIK UNIVERSITY

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S-2023 Date: 01-05-25 Time: 09:30 AM to 11:30 AM
Regular / Backlog Exam**B.ID - SEMESTER- II EXAMINATION****Course Code: BIID31202****Total Marks: 50****Course Name: Building Materials, Systems and Environmental Studies.****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Draw sketches wherever needed.

Q- 1. Do as directed (attempt all questions)**10**

1. Stress is given by equation = load / length (True/False)
2. Depth of wooden lintel = $1/12$ to $1/8$ of _____
3. _____ is the plywood panels attached to the exterior of the wooden framing to provide structural stability and a base for exterior finishes.
4. In _____ bond brick is laid with its length parallel to the face or front or direction of the wall.
5. Stone masonry having finely dressed stones laid in cement or lime mortar is known as _____
6. Brick walls are light in weight compared to stone walls (True/ False)
7. Stone wall can be constructed without use of mortar (True/ False)
8. Hoop tension means , diameter of member increases. (True/False)
9. _____ is the study of 30 years of climatic data.
10. Micro-climate is the climate of a larger area such as a country. (True/ False)

Q.2 Answer in brief (any Two)**10**

1. Enlist the key component of wooden framing and explain any one component.
2. What are the Chemical Components present in the soil for good brick earth?
3. Explain types of pointing.
4. Explain the characteristics of Hot and Dry Climate with sketches

Q.3. Explain in detail with sketches (any Two)**20**

1. Explain load transfer in dome with proper sketches . Also explain load transfer in latticed dome & draw the same.
2. Classify various types of doors. Draw & label the single shutter wooden frame in detail.
3. Explain the brick manufacturing process in detail.
4. Explain importance of temperature stresses, factors affecting temperature stress & how it can be taken care of.

Q.4. Draw detailed sketches (any two)**10**

1. a. Three way double layer vault b. Diagonal on square two way double layer space frame.
2. Sketch & label wooden roof truss components.
3. Wooden floor construction showing various components
4. Plan and elevation of one brick thick English bond