

SARVAJANIK UNIVERSITY

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S-2026 Date: 04-05-26 Time: 01:30 PM to 03:30 PM
Regular / Backlog Exam

BID - SEMESTER- VI EXAMINATION

Course Code : BIID2160 2

Total Marks:50

Course Name : Advanced Interior Materials, Systems & Services

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Support your answers with necessary sketches wherever required.

Q1 Do as directed.

(10 marks)

1. In recent years a bacteria-based concrete is being developed in order to extend the service life. It is termed as _____ concrete.
2. The convex surface may be provided for _____ of reflected sound waves at one point.
3. Full Form of SAC is _____.
4. Reverberation is an acoustical defect (State True/False)
5. Give full form of HVAC is _____.
6. In a Building Automation system, _____ is a device that converts an electrical signal to a physical output.
7. Full Form of BMS is _____.
8. A home automation system will monitor and/or control home attributes such as lighting, climate, entertainment systems, and appliances (State True/ False)
9. Wall-mounted terminals, tablet or desktop computers, a mobile phone application, or a web interface that may also be accessible off-site through the Internet, are termed as _____ in reference to automation.
10. IGBC ratings are only applicable to new buildings. (State True/False)

Q2 Answer in Brief. (Any two)

(10 marks)

1. Brief on Various categories of building materials.
2. Brief description on Fabric Formwork

3. What are the design solutions and applications to minimize refraction & interference.
4. Why is wood listed as a sustainable material?

Q3 Answer in Detail. (Any two)

(20 marks)

1. Explain what is innovative / smart building material? Enlist various innovative materials. Explain any one in detail.
2. What points should be considered before selecting an acoustic material?
3. What are Green Building materials? List and explain in detail any three materials and its application techniques.

Q.4. Answer in Detail. (Any one)

(10 marks)

1. Explain the key difference between Sensors and Actuators. Also enlist the types of sensors. **(5 marks)**

2. Attempt any ONE: **(5 marks)**

(A) Design a smart home automation system for a luxurious living room of size 6mX10mX3.6 m. Make necessary assumptions for openings. Present your answer with neat and illustrated conceptual layout plans/sectional elevations/sketches explaining distribution and integration of various elements/components within the space and their role in the entire system. Also integrate security system with the design.

OR

(B) Design a material palette and acoustic treatment strategy for a dance studio of Size 8m x 12m x 3.6 m. Two longer sides of the studio are the common walls with adjacent premises and both shorter sides have a **centrally located opening of 4 m width and 2.1 m height**. Develop a **material palette** for walls, ceiling, and flooring with fixing details. Present your answer with neat and illustrated layout plans/sections showing acoustical layers/ sectional elevation/sketches explaining materiality, detailing and integrations of various components.