

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-V EXAMINATION – WINTER 2025

Subject Code:3151711

Date:17-11-2025

Subject Name:Building Automation

Time:10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

	MARKS
Q.1 (a) What is the concept of BMS? Explain it in brief.	03
(b) Differentiate between home automation and building automation.	04
(c) Justify that “Building Automation” improves the functional efficiency in any building.	07
Q.2 (a) Explain the concept of fire alarm system.	03
(b) Explain any one type of digital fire sensor in brief.	04
(c) List out various types of Smoke Detectors and explain any one in detail.	07
OR	
(c) Explain various fire standards in detail.	07
Q.3 (a) What is “access control” in building automation?	03
(b) Briefly explain DAC and MAC.	04
(c) List out various methods of access control and explain any one in detail.	07
OR	
Q.3 (a) Explain RFID enabled access control in brief.	03
(b) Briefly explain NVR and DVR.	04
(c) List out various types of CCTV cameras and explain any two of them in detail.	07
Q.4 (a) What is need of HVAC as a part of building automation	03
(b) Explain the concept of ASHARE symbols with examples	04
(c) Explain HVAC system in detail	07
OR	
Q.4 (a) What is chiller? Why is it required in HVAC	03
(b) Explain the concept of LEED.	04
(c) What is AHU in HVAC? Explain various controls in HVAC system.	07
Q.5 (a) What is called green building? Explain in brief.	03
(b) Explain in brief illumination control in smart buildings.	04
(c) Explain various energy saving concepts and methods in buildings.	07
OR	
Q.5 (a) Briefly explain selection criteria for various CCTV.	03
(b) Explain in brief different cable types for CCTV.	04
(c) What is SMART building? Explain IBMS in detail.	07
