GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– VII (New) EXAMINATION – WINTER 2019

Subject Code: 2171713   **Date: 30/11/2019**

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.

			MARKS
Q.1	**(a)**	Draw architecture of BMS.	03
	(b)	State some common point between smart building and green building.	04
	(c)	List components of Building Automation System and explain Building Automation system with block diagram.	07
Q.2	**(a)**	Discuss classification of FAS loop.	03
	(b)	Describe basic fire alarm control system with block diagram.	04
	(c)	Classify different fire detectors in detail & explain smoke detector in detail.	07
		OR	
	(c)	Discuss design consideration of EPBX system and its components in BMS.	07
Q.3	**(a)**	Define resolution and F number in camera.	03
	(b)	Compare different cables which are used in camera system.	04
	(c)	Discuss IBMS project cycle in detail.	07
		OR	
Q.3	**(a)**	Compare NVR and DVR.	03
	(b)	Justify use of people counter in access control system.	04
	(c)	Discuss access control system for typical door wiring.	07
Q.4	**(a)**	Brief about perimeter protection.	03
	(b)	Discuss RFID enabled access control system.	04
	(c)	Compare DAC, MAC and RBAC in context of computer system access control.	07
		OR	
Q.4	**(a)**	Describe air handling units with basic operation of HVAC.	03
	(b)	Discuss use of dimmers for lighting control.	04
	(c)	Brief about Green building- concept and certification.	07
Q.5	**(a)**	Compare smart card and proximity card.	03
	(b)	Enlist different communication protocols used in HVAC system. Explain any one in brief.	04
	(c)	Describe HVAC sequence of operation in detail.	07
		OR	
Q.5	**(a)**	Discuss DDC related to HVAC system.	03
	(b)	Discuss human comfort related with HVAC system.	04
	(c)	Compare VAV and CAV in detail.	07

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