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GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – WINTER 2018

Subject Code: 2171713   **Date: 03/12/2018**

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.**

Q.1	**(a)**	Explain project steps for construction of new smart building.	**03**
	(b)	Enlist different communication protocol used in HVAC system. Explain any one of them.	**04**
	(c)	Draw system architecture of Building Automation System (BAS) and explain in detail.	**07**
Q.2	**(a)**	Discuss about the different phases of fire.	**03**
	(b)	Brief about fire detection and alarm system with suitable diagram.	**04**
	(c)	Write a short note on smoke detector.	**07**
		OR	
	(c)	Explain in detail: CCTV.	**07**
Q.3	**(a)**	What is the difference between NVR and DVR?	**03**
	(b)	State the different levels of security systems.	**04**
	(c)	Explain in detail: Air Handling Unit.	**07**
		OR	
Q.3	**(a)**	What is ASHRAE? Explain symbols associated with it.	**03**
	(b)	Explain the following terms: DAC, MAC and RBAC	**04**
	(c)	What is the function of HVAC system? Explain its architecture.	**07**
Q.4	**(a)**	Brief about access control system for vehicle and people.	**03**
	(b)	Explain how Dimmers are used for lighting control?	**04**
	(c)	Explain concept of green building (LEED) using suitable example.	**07**
		OR	
Q.4	**(a)**	Brief about Energy Savings concept and Methods.	**03**
	(b)	What are the advantages of IP based surveillance system?	**04**
	(c)	Explain IBMS project cycle.	**07**
Q.5	**(a)**	Differentiate between VAV and CAV.	**03**
	(b)	List out the types of camera and explain any one of them.	**04**
	(c)	Explain building information model.	**07**
		OR	
Q.5	**(a)**	Discuss about BACnet and LON in brief.	**03**
	(b)	How Smart card differs from Proximity card?	**04**
	(c)	Write a short note on EPABX system and its components.	**07**

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