GUJARAT TECHNOLOGICAL UNIVERSITY
B.VOC. –SEMESTER 1(NEW SYLLABUS) EXAMINATION- WINTER 2018

Subject Code: 1110402   **Date: 17-01-2019**

Subject Name: Basics of Air Conditioning

Time: 10:30 AM to 12:30 PM   **Total Marks: 50**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

			Marks
Q.1	**(a)**	**Define following terms :** 1) Moist Air 2) Dry Bulb Temperature (DBT) 3) Dew Point Temperature (DPT) 4) Wet Bulb Temperature (WBT) 5) Dew point Depression	**05**
	(b)	Component of Air conditioning System and its Work	**05**
Q.2	**(a)**	Draw Psychrometric chart and mark psychrometric various properties on chart.	**05**
	(b)	Explain Dalton's law of partial pressure and Compotation of Air.	**05**
		OR	
	(b)	Explain Dehumidification and Humidification. also plot in Psychometric Chart	**05**
Q.3	**(a)**	What is Air Conditioning? Define Psychrometry?	**05**
	(b)	Application of Air Conditioning System.	**05**
		OR	
Q.3	**(a)**	Explain Central Air Conditioning system.	**05**
	(b)	Explain specific Humidity, Degree of Saturation, Relative Humidity, Humid Specific volume, Enthalpy of moist air.	**05**
Q.4	**(a)**	Explain Sensible Heating and Sensible Cooling Process and also plot in Psychometric Chart	**05**
	(b)	Factors affecting the Sensible heat load.	**05**
		OR	
Q.4	**(a)**	What is Latent heat load? Factors affecting the Latent heat load.	**05**
	(b)	Short note on Window Air Conditioner.	**05**
Q.5	**(a)**	Explain summer air conditioning system with neat sketch.	**05**
	(b)	Find all psychrometric properties for the following data using chart. 1) DBT=30 ^{0}C, WBT= 25 ^{0}C 2) DPT= 15 ^{0}C, DBT = 35 ^{0}C	**05**
		OR	
Q.5	**(a)**	Barometric pressure 1 bar. DBT = 33 ^{0}C, WBT=23 ^{0}C Calculate 1) Vapor pressure 2) Relative Humidity (RH) 3) Specific Humidity 4) DPT 5) Enthalpy	**05**
	(b)	Explain Year all around Air Conditioning System.	**05**

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