Seat No.: _____ Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BA – SEMESTER – 3 - EXAMINATION – SUMMER 2018

Subject Code: 1035005 **Date: 23-May-2018**

Subject Name: Environmental Scienec

Time: 02:30 PM TO 04:30 PM **Total Marks: 50**

Instructions:

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

Q.1	**(a)**	Describe design characteristics of cold climate with diagrams.	**05**
	(b	Describe design strategies of moderate climate in detail.	**05**
Q.2	**(a)**	Explain following terms with necessary diagrams (Any 5): 1. Insulation 2. Stack Ventilation, 3. Water wall, 4. Cavity wall 5. Wind tunnel 6. Coriolis force 7. Polar winds	**05**
	(b	What are the causes of seasonal changes on earth?	**05**
		OR	
	(b	What is macro climate and micro climate.	**05**
Q.3	**(a)**	Explain – Heat production in body and heat loss process.	**05**
	(b	Explain heat exchange process in the building	**05**
		OR	
Q.3	**(a)**	Why Ventilation is needed in building?	**05**
	(b	Differentiate cross ventilation and stack ventilation	**05**
Q.4	**(a)**	What is light? Explain behaviors of light when received by any object.	**05**
	(b	What is daylight factor?	**05**
		OR	
Q.4	**(a)**	Explain following terms with necessary diagrams (Any 5) 1. Reflectance 2. Transmittance 3. Refraction 4. Diffusion 5. De-humidification 6. Convection 7. Conduction	**05**
	(b	How size, positioning, porjections and control of opening effect ventilation & day- light.	**05**
Q.5		Describe any climate responsive traditional building for hot & dry climate with diagram.	**10**
		OR	
Q.5		Explain modern & mechanical techniques for designing of climate responsive building for any climate.	**10**

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