

GUJARAT TECHNOLOGICAL UNIVERSITY
BARCH – SEMESTER-III– • EXAMINATION – SUMMER 2015

Subject Code:1035005

Date: 19/05/2015

Subject Name: Environmental Science

Time:2:30 PM – 4:30 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) Which are the five major climates of India? Describe characteristics of any one climate in detail. **05**
- (b) Describe design principles of warm-humid climate with diagrams. **05**
- Q.2** (a) Explain following terms with necessary diagrams (Any 5): **05**
1. Trombe Wall, 2. Stack Ventilation, 3. Water wall, 4. Wing wall
 5. Wind tower, 6. Wind tunnel, 7. Doldrums
- (b) Describe the three ways of how earth-sun relationship affect the amount of solar radiation received at the particular point of the earth surface? **05**
- OR**
- (b) What is wind? How does Wind generate? How Coriolis force affect global wind pattern? **05**
- Q.3** (a) Why Ventilation is needed in building? **05**
- (b) How to achieve good ventilation in building? **05**
- OR**
- Q.3** (a) How MVHR System works in cold climate? **05**
- (b) Explain different elements of climate. **05**
- Q.4** (a) What is light? Explain behaviors of light when received by any object. **05**
- (b) Describe importance of courtyard & skylights for natural lighting with diagrams. **05**
- OR**
- Q.4** (a) Explain following terms with necessary diagrams (Any 5) **05**
1. Reflectance
 2. Transmittance
 3. Refraction
 4. Diffusion
 5. Luminance
 6. Luminous Flux
 7. Glare
- (b) What is daylight? Describe Advantages of daylight. **05**
- Q.5** Describe any climate responsive traditional building form with diagrams. **10**
- OR**
- Q.5** Describe any climate responsive modern building with diagrams. **10**
