



PBC-1601390101052900 Seat No. _____

Third Year B. A. (I.D) (Sem. V) (CBCS) Examination
November / December - 2018
Environmental Science - I

Time : 2 Hours]

[Total Marks : 50

- Instructions :** (1) All questions are compulsory.
(2) Any ambiguity will be considered as a wrong answer.

- 1 (a) True or false : 5
- (a) Streets are wider in Hot and Dry climatic conditions.
 - (b) 'Jhali' is an important element seen in Hot and Dry climatic regions.
 - (c) Smaller the openings, hotter are the wind flow.
 - (d) Solar Azimuth angle defines in which direction the sun is, whereas the Solar Zenith angle or its complementary angle solar elevation defines how high the sun is.
 - (e) WEST SIDE of a house should never be shaded.
 - (f) Courtyards and Verandahs are not seen in Kerala/South India.
 - (g) Houses in Cold climate are largely made up of wood.
 - (h) Decrease air circulation in Humid / Mediterranean regions.
 - (i) Buildings, in Monsoon climatic condition should not have a sloping roof.
 - (j) One should not provide maximum shading of direct and reflected sun radiation in the hot season.

- (b) Match the Following (to the closest appropriate) : **5**
1. Cold Climate (a) Large windows and semi-open spaces are an important element.
 2. Use of Domes (b) Small openings and Jhalis are seen.
 3. Hot and Humid (c) Houses are seen on stilts / high Plinths.
 4. Hot and Dry (d) Trapping of Heat/minimizing heat loss is required.
 5. Monsoon (e) Hassan Fathy
- 2** Attempt the following with sketches : **10**
- (a) Define the term ventilation. **1**
 - (b) Sketch double wall construction and give use of the same. **2**
 - (c) Explain your understanding on macro and micro climate. **2**
 - (d) Explain with neat sketches wind movement and its effects around the high rise buildings. **2**
 - (e) Explain the climatic characteristic of the region and (in-detail) design response by the following architect (in their work) : **3**
 - (a) Hassan Fathy
- OR**
- (b) Geoffrey bawa
- 3** Attempt any one of the following : **15**
- (a) What is a Sun-Path Diagram? Explain with illustrations. **OR**
 - (b) Define topography. Give any two uses of topography in designing building. Give uses of water body as landscape elements.
- 4** Explain Day lighting in detail with neat sketches and define LUMENS and LUX. **15**