



JAG-1601390101052900

Seat No. _____

Third Year B. A. (ID) (Sem. V) Examination

November - 2019

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 True or False : 10

1. 'Jhali' is an important element seen in Cold and Dry climatic regions.
2. One should not provide maximum shading of direct and reflected sun radiation in the hot season.
3. Smaller the openings, hotter are the wind flow.
4. Building, in Monsoon climatic condition does not have a sloping roof.
5. Streets are narrow in Hot and Dry climatic conditions.
6. Courtyards and Verandahs are seen in Kerala/South India.
7. Houses in Cold climate are made up largely of wood.
8. Decrease air circulation in Humid / Mediterranean regions.
9. Accurate location-specific knowledge of sun path and climatic conditions is essential for economic decisions about solar collector area.
10. 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.

- 2 Explain (any 5) 10**
1. Reflectance
 2. Sunlight
 3. Illuminance
 4. Task lighting
 5. Reflected Glare
 6. Internal reflected component
 7. Spread Vs. Penetration of light.
- 3 Attempt the following in detail. (With sketches) 15**
- A. Explain Sun-Path Diagram with Illustrations.
 - B. Define topography. Give any two uses of topography in designing building. Give uses of water body as landscape elements.
 - C. Explain the climatic characteristic of the region and (in-detail) design response by the following architects (in their work) :
 1. Hassan Fathy **OR**
 2. Geoffrey Bawa.
- 4 Short and Descriptive Questions : (any 3) 15**
1. Discuss better location and orientation of all residential activities on the basis of natural light.
 2. Explain all possible steps to reduce glare because of bright opening located on the west side wall.
 3. Reflectance of different materials.
 4. Explain types of shading devices, its orientation and other related details.
 5. Importance of natural light in interior spaces.