

BACHELOR OF ARCHITECTURE (B.Arch.)

Term-End Examination

June, 2016

00400

BAR-029 : ARCHITECTURAL SCIENCES AND SERVICES - I (CLIMATOLOGY)

Time : 3 hours

Maximum Marks : 70

Note : Part A is compulsory. Attempt any three questions from part B. All questions carry equal marks. Sketches are compulsory.

PART A

1. Write short notes on any *four* of the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Stack Effect
- (b) Mahoney Tables
- (c) Relative Humidity
- (d) Effective Temperature
- (e) Solar Sky Component

2. Differentiate between the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Trade winds and Polar winds
- (b) Humidity and Precipitation
- (c) Evaporative cooling and Mechanical cooling
- (d) Sol-air temperature and Solar gain factor

PART B

3. What do you understand by 'Shading Devices' in a building ? Explain with the help of sketches, the role of shading devices in curbing sun and rain. 14
 4. Suggest the design considerations for an institutional building in wet and humid climate. 14
 5. Explain passive environmental control mechanisms in traditional and modern buildings. 14
 6. Define Heat. What are the various methods of heat transmission in a building ? What are the measures to create comfortable built forms in accordance with heat transmission phenomenon ? 14
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