

BACHELOR OF ARCHITECTURE (B.Arch.)**Term-End Examination****December, 2015****BAR-029 : ARCHITECTURAL SCIENCES AND
SERVICES – I (CLIMATOLOGY)***Time : 3 hours**Maximum Marks : 70*

Note : Attempt five questions in all. Question no. 1 is compulsory. All questions carry equal marks. Sketches are compulsory to support the answers.

1. Differentiate between any **four** of the following :
- $$4 \times 3 \frac{1}{2} = 14$$
- (a) CET (Corrected Effective Temperature) and OT (Operative Temperature)
- (b) Strategies for Indoor and Outdoor Ventilation
- (c) Absolute Humidity and Relative Humidity
- (d) Micro and Macro Climate
- (e) Shading Devices for Indoor and Outdoor Conditions

2. Explain the issues of ecological balance citing an example of any particular region in India. 14
 3. Suggest the design considerations for a housing complex in composite climate. 14
 4. Explain the principles of “daylighting” and its importance in modern design considerations of a building. 14
 5. What do you understand by “Mechanical Controls” of heat transmission in a building ? Mention the type and objective of these mechanical controls. 14
 6. Write short notes on any *two* of the following : $2 \times 7 = 14$
 - (a) Solar energy and its technical applications
 - (b) Thermal properties of building materials
 - (c) Psychrometric chart
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