

BACHELOR OF ARCHITECTURE (B.Arch.)

Term-End Examination

00013

June, 2018

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

Time : 3 hours

Maximum Marks : 70

Note : *All questions carry equal marks. Question no. 1 is compulsory. Attempt five questions in total.*

1. Explain any **two** of the following terms : 7×2=14
 - (a) Physiological Comfort
 - (b) Ecological Balance
 - (c) Bioclimatic Chart

2. Taking examples from different parts of India, elaborate over issues of ecological balance and the need to maintain it. 14

3. What is solar passive system ? Explain the techniques to achieve solar passive cooling in the summer period, with appropriate sketches. 14

4. Define Ventilation. Discuss about the methods of natural and mechanical ventilation, with their relevant advantages and importance. 14
 5. Write about the application of comfort diagrams, with their importance in building design. 14
 6. Discuss passive environmental control mechanisms in traditionally built environment in cold regions. Support with examples. 14
 7. Write short notes on any **two** of the following : $7 \times 2 = 14$
 - (a) Shading Devices
 - (b) Thermal Properties of Materials
 - (c) Climatological Site Analysis
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