

BACHELOR OF ARCHITECTURE

Term-End Examination

June, 2010

**BAR-029 : ARCHITECTURAL SCIENCES AND
SERVICES - I**

Time : 3 hours

Maximum Marks : 70

*Note : Attempt five questions in all. Section-A is compulsory.
Attempt any four questions from Section-B.*

SECTION - A

(Compulsory Question)

1. Discuss briefly with notes and sketches *any four* of the followings : $4 \times 7\frac{1}{2} = 30$
- (a) Sol Air Temperature
 - (b) Trombe walls
 - (c) Solar charts
 - (d) U-value of materials
 - (e) Global warming
 - (f) Psychrometric chart
 - (g) Mohoney tables

SECTION - B

Attempt *any four* questions from this section.
All questions carry equal marks :

2. Explain briefly the process and the method of calculating the Heat transfer in Buildings. Elaborate with neat sketches. 10
3. Discuss the method of designing a shading device of a window facing south (Assume any climatic zone). 10
4. Discuss the design considerations for deciding the location and sizes of windows in a bed room for good cross ventilation. 10
5. Discuss briefly the planning criteria (with respect to climatic response) of the court yard houses of Hot-Arid Climate (e.g. Jaipur/Jaislemer). 10
6. Discuss briefly the term, "Energy Efficiency in buildings". What passive strategies you would adopt while designing an office building for Energy efficiency. (You may choose any one climatic zone of India). 10
7. Discuss briefly the different types of shading devices. Illustrate with examples from traditional and contemporary built environments. 10