

## **B.ARCH-SEMESTER III-INTERNAL EXAMINATION-2015**

**SUBJECT CODE: 1035005**

**DATE: 2/11/2015**

**SUBJECT NAME: ENVIRONMENTAL SCIENCE**

**TIME: 10.00am-12.00pm**

**TOTAL MARKS: 50**

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

**Q.1** Explain the process of heat exchange through building and human body.

**5 MARKS**

**Q.2** Which are the five measure climates of India? Describe the characteristics of any one climate in detail.

**5 MARKS**

**Q.3** what is climate? Enlist and explain briefly its parameters, mention design techniques for climate responsive design

**5 MARKS**

**Q.4** Enlist passive and active cooling techniques required in tropical climatic region and passive and active heating techniques required in cold and dry climate.

**5MARKS**

**Q.5** Explain how to achieve good ventilation in a building.

**OR**

How size, positioning and control of opening affect ventilation, Explain in detail.

**5MARKS**

**Q.6 (a)** Explain dual nature of light and types of reflection.

**(b)** Describe three ways of how earth sun relationship affect the amount of solar radiation received at a particular point of earth

Surface .

**6 MARKS**

**Q.7 (a)** Explain different types of shading devices, factors and functions to be considered while designing.

**(b)** Enlist different climatic tools. Explain in detail concept of Mahoney table in context with architecture.

**(c)** What is courtyard planning? State its application and advantages.

**9 MARKS**

**Q.8** Explain **any five** of the following briefly.

**10 MARKS**

**(a)** Coriolis and doldrums force.

**(b)** Cross and stack ventilation in detail.

**(c)** ERC , IR , SC

**(d)** Concept of periodic heat flow and time lag.

**(e)** Sunpath diagram.

**(f)** Trombe wall.

**(g)** Effect of landscape on climate and architecture.