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**Third Semester B.Arch. Degree Examination, Dec.2014/Jan.2015**  
**Climatology**

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Describe microclimate and macroclimate with examples. (10 Marks)  
b. Explain the factors which affect the urban climate. (10 Marks)
- 2 a. What is "time lag"? Describe briefly. (10 Marks)  
b. What are the means through which "Thermal insulation" can be effectively achieved in hot and dry climates, through walls and roofs? Explain the materials and techniques. (10 Marks)
- 3 a. Which are the climatic zones needing good air movement through the buildings and why? (08 Marks)  
b. Explain with the help of sketches, wind movement inside and outside habitable rooms, in plans and sections. (12 Marks)
- 4 a. How can "INSOLATION" (Incoming Solar Radiation) be controlled? Explain. (12 Marks)  
b. Describe the elements which help us to alter the micro climate on site. (08 Marks)
- 5 a. Describe 'Day light factor'. (05 Marks)  
b. Explain how DLF can be utilized to improve the functioning of habitable spaces. (15 Marks)
- 6 Explain with sketches:  
a. Wind catchers.  
b. Shading devices.  
c. Bioclimatic chart.  
d. Climatic zones of the world. (20 Marks)
- 7 Write short notes on:  
a. Comfort zone  
b. Stack effect  
c. Sun path diagrams  
d. Thermometers. (20 Marks)
- 8 a. Describe the earth and sun relationship. Explain the cause for seasons. (10 Marks)  
b. Explain the process of 'body's heat exchange with sketches. (10 Marks)

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