

MANIPAL UNIVERSITY

FOURTH SEMESTER B. ARCH. DEGREE EXAMINATION – APRIL/MAY 2014

SUBJECT: CLIMATOLOGY (ARC-214)

Thursday, May 15, 2014

Time: 10:00 - 13:00 Hrs.

Max. Marks: 50

- ✍ Answer any FIVE from the following. Answer all parts of a question.
✍ Give sketches wherever necessary.

- 1A. What do you understand by Climatology? What is its importance in building design?
1B. Differentiate between climate and weather.
1C. Name the different types of climate prevailing in India.

(3+3+4 = 10 marks)

- 2A. Enlist and elaborate the Thermal Comfort Factors.
2B. Explain their implication in Warm and humid climate.

(5+5 = 10 marks)

- 3A. Explain any three types of structural control methods adopted to provide comfort conditions in warm and humid climate. Elaborate with sketches.
3B. What is ventilation? What are its objectives? Explain how the pattern of air movement is affected in a room by orientation and position of building and openings.

(4+6 = 10 marks)

- 4A. What do you understand by the term Daylighting? What are the various design parameters which can help in achieving effective day lighting in tropics?
4B. What is Sun path diagram? What are solar azimuth and solar altitude angle? How is the orientation of buildings effected by sun path?

(5+5 = 10 marks)

- 5A. Explain various process of heat exchange of buildings in detail. Explain with sketches.
5B. Enlist and elaborate the different modes of heat flow in building and environment. Explain with sketches.

(5+5 = 10 marks)

- 6A. Briefly explain the characteristics of hot and dry climate.
6B. Explain the building design recommendations for the same.

(4+6 = 10 marks)

