

Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION
THIRD SEMESTER B. ARCH. DEGREE EXAMINATION – JANUARY 2020
SUBJECT: ARC-14-211 - PRINCIPLES OF CLIMATIC DESIGN
(2014 SCHEME)

Monday, January 06, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 50

- ✍ Answer ALL full questions.
- ✍ Assume suitable data wherever necessary.

- 1A. Elaborate any five parameters of climate in detail.
1B. Also mention the value of any one parameter with respect to five different climates.
(5+5 = 10 marks)

2. Outline atleast two difference between horizontal shading devices and vertical shading devices. Explain with neat sketches.
(5+5 = 10 marks)

- 3A. What is thermal comfort model? What are the characteristics of hot and dry climate and its impact on the thermal comfort?
3B. Demonstrate five different design strategies of Cold climate zone for designing residential buildings.
((2+3)+(1 mark × 5) = 10 marks)

- 4A. Describe two major features of temperate climate. Give atleast one example of Indian city falling in temperate climate.
4B. Detail out one natural ventilation system with respect to temperate climate. Also, illustrate using appropriate sketches.
((2+2)+(4+2) = 10 marks)

- 5A. What parameters are considered for building envelope design, with respect to the climate?
5B. Also mention the value for one parameter for any one climate zone as per Indian codes.
(6+4 = 10 marks)

