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MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B. ARCH. DEGREE EXAMINATION – NOVEMBER 2019

SUBJECT: ARC-14-211 - PRINCIPLES OF CLIMATIC DESIGN (2014 SCHEME)

Thursday, November 14, 2019

Time: 10:00 – 13:00 Hrs.

Max. Marks: 50

✍ Answer ALL full questions.

✍ Assume suitable data wherever necessary.

1A. What attribute makes climate change evident?

1B. Discuss three contributors from construction industry acting towards climate change.

(4+6 = 10 marks)

2A. List down the five different Climatic zones of India according to Energy Conservation Building Code.

2B. Also mention the name of atleast one Indian city for each of these climates.

2C. Identify the characteristics for any two of the following climates zones with respect to built environment:

i) Hot and Dry Climate

ii) Warm and Humid Climate

iii) Temperate Climate

iv) Cold Climate

(2½+2½+5 = 10 marks)

3A. Interpret your understanding of Bio Climatic Design.

3B. Extend by summarizing the parameters for three different building components.

(4+6 = 10 marks)

4A. Describe two major features of composite climate.

4B. Give atleast one example of Indian city falling in composite climate.

4C. Detail out one natural ventilation system with respect to composite climate.

4D. Also, illustrate using appropriate sketches.

(2+2+4+2 = 10 marks)

5. Write down the full form for the following acronyms and answer the associated question in one sentence:

5A. NBC and its role

5B. PMV and its use

5C. ECBC and its purpose

5D. BEE and its role

5E. BIS and role of BIS SP 41

(2 marks × 5 = 10 marks)

