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MANIPAL UNIVERSITY

EIGHTH SEMESTER B. ARCH. DEGREE EXAMINATION – MAY 2017

SUBJECT: ELECTIVE I – ENERGY CONSCIOUS DESIGN (ARC-406.3)

Monday, May 08, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 50

✍ Answer any FIVE questions.

✍ Support your answers with sketches wherever necessary.

1. Explain the various strategies in buildings to achieve passive cooling in hot and humid climatic regions.

(10 marks)

2. Explain the various design objectives and strategies in Cold climates.

(10 marks)

3. Explain the various strategies for sustainable site planning. What is Brownfield development?

(7+3 = 10 marks)

4. What are the various measures that can be implemented to reduce potable water usage in buildings? Explain the various on site waste management strategies.

(5+5 = 10 marks)

5. Explain the following:

5A. Climate change

5B. Embodied energy of building materials

(5+5 = 10 marks)

6. Explain the process of heat transfer in buildings. What is Building energy simulation.

(5+5 = 10 marks)

