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INTERNATIONAL CENTRE FOR APPLIED SCIENCES

(Manipal University)

THIRD SEMESTER B.S. DEGREE EXAMINATION–OCT./NOV.-2017

SUBJECT: ENVIRONMENTAL TECHNOLOGY (AE 232)

(BRANCH: ARCHITECTURE AND CIVIL)

Wednesday, 8 November 2017

Time: 3 Hours

Max. Marks: 100

- ✓ Answer ANY FIVE full Questions.
- ✓ Missing data, if any, may be suitably assumed
- ✓ Support your answers with sketches wherever required.

1. a) What is the difference between weather and climate?
b) What are the factors affecting thermal comfort? Brief the factors.
c) What are the design considerations to be made in composite climatic regions?
Explain with neat supporting sketches. (2+8+10 Marks)
2. a) Explain vapour compression cycle with a neat labelled diagram.
b) List the advantage and disadvantages of packaged air conditioning systems.
c) List the aspects to be considered before installing air conditioning systems in coastal regions. (10+5+5 Marks)
3. a) Define i) Lift ii) escalator iii) travelator
b) Explain hydraulic lift with a neat labelled sketch. Mention its advantages and disadvantages. (6+10+4 Marks)
4. a) List the types of firefighting equipments explain any two of them.
b) What are the design considerations to be made in a high rise building in terms of fire safety? (14+6 marks)
5. a) List the layouts of distribution network in water supply. Briefly explain grid iron system with a neat supporting sketch with its advantages and disadvantages.
b) Briefly explain the treatment of water from different sources. (8+12 Marks)

6. a) What are the advantages and disadvantages of Radial distribution system in electrical distribution?
b) List the conventional sources of electrical generation. Explain any thermal plant with a neat labelled sketch. (8+12Marks)
7. Mention the different types of pipes used in water distribution system and explain any two types of pipes with their advantages and disadvantages. (20Marks)
8. a) What is sewage? Mention the aims and objectives of sewage disposal.
b) Explain conservancy system. Mention the advantages and disadvantages of it. (10+10Marks)

