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MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER B. ARCH. DEGREE EXAMINATION – DEC 2019/JAN 2020

SUBJECT: ARC-14-111 – PRINCIPLES OF ENVIRONMENTAL DESIGN
(2014 SCHEME)

Tuesday, January 07, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 50

- ✍ Answer any FIVE questions.
- ✍ Support the answers with necessary sketches.

- 1A. Describe structural and non-structural mitigation measures in disaster management.
- 1B. Examine the need for mitigation in disaster management.
- 1C. Describe briefly what are the processes involved in disaster management.

(3+3+4 = 10 marks)

2. Write short note on:

- 2A. Conduction
- 2B. Convection
- 2C. Radiation
- 2D. Stack effect

(2½ marks × 4 = 10 marks)

- 3A. Define 'Sustainable Development'. Briefly describe the three spheres of sustainability.
- 3B. Briefly explain how climate change and global warming are inter related.

(5+5 = 10 marks)

- 4A. What is an incinerator? Explain its use and impact on environment.
- 4B. Describe briefly rain water harvesting and its working process.

(5+5 = 10 mark)

- 5A. Define biodiversity and explain the factors that affect the changes in biodiversity.
- 5B. What is the structure and function of an ecosystem?

(7+3 = 10 marks)

- 6A. How does a courtyard help in maintaining the thermal comfort of a building?
- 6B. What are the principles of organic architecture?

(5+5 = 10 marks)

