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MANIPAL UNIVERSITY

FOURTH SEMESTER B. ARCH. DEGREE EXAMINATION – JULY 2017

SUBJECT: BUILDING SERVICES III (ARC-14-208) (2014 SCHEME)

Tuesday, July 11, 2017

Time: 14:00 - 17:00 Hrs.

Max. Marks: 50

✍ Answer any FIVE questions.

✍ Support your answers with sketches wherever it is required.

- 1A. Explain the role of Absorber and Generator in an Absorption Refrigeration Cycle.
1B. Explain how Psychrometric Chart helps in understanding Human Thermal Comfort.
(5+5 = 10 marks)

- 2A. What is zoning with respect to Air Conditioning of a building? What are the considerations for zoning of a building for Air Conditioning?
2B. Explain with the help of diagrams the different types of ductable packaged air conditioning systems.
(5+5 = 10 marks)

- 3A. Explain any three acoustical defects commonly found in buildings. Outline the design considerations to be followed to avoid these defects.
3B. Noise should be an important consideration at every stage of design – Explain.
(6+4 = 10 marks)

- 4A. What are the acoustical considerations for the design of a cinema theatre?
4B. Explain any two different acoustic materials which can be applied on ceilings.
(6+4 = 10 marks)

5. Write short notes on any FOUR of the following:

- 5A. Window Air Conditioning Units
5B. Wavelength and Frequency of Sound
5C. Sound Absorption Coefficient
5D. Lighting control systems in Intelligent Buildings
5E. Condenser in Refrigeration Cycle

(2½ marks × 4 = 10 marks)

- 6A. Explain integrated building management systems and outline their benefits.
6B. Explain the use of intelligent systems in fire safety of a building.
(5+5 = 10 marks)

