

MANIPAL UNIVERSITY

FOURTH/FIFTH SEMESTER B. ARCH. DEGREE EXAMINATION – MAY 2017

SUBJECT: BUILDING SERVICES III (ARC-14-208/ARC 311)
(2014/2010 SCHEME)

Wednesday, May 03, 2017

Time: 10:00 - 13:00 Hrs.

Max. Marks: 50

Answer any FIVE FULL questions.

1A. Explain advantages of HVAC system over natural ventilation.

1B. Explain the working principles of Window AC.

(4+6 = 10 marks)

2A. Explain the advantages and disadvantages of the following AC System:

i) Split AC

ii) Window AC

2B. Explain the components of chilled water central plant AC system.

(4+6 = 10 marks)

3A. What are the methods to be followed to reduce noise in:

i) HVAC System

ii) Hospitals

3B. Explain the following:

i) Masking of noise

ii) Sound shadow

(6+4 = 10 marks)

4. Explain the acoustical treatment for the following spaces in an auditorium:

a) Stage

b) Seating and flooring

c) Rear Wall of the auditorium

d) Ceiling

e) Side walls of the auditorium

(2 marks × 5 = 10 marks)

5A. What are the benefits of Building Automation System?

5B. What are the application of sensors in BAS?

(5+5 = 10 marks)

6. Explain the following sound absorbers in detail:

a) Space absorbers

b) Silt absorbers

c) Cavity absorbers

d) Variable absorbers

e) Perforated panel absorbers

(2 marks × 5 = 10 marks)

