

CBCS SCHEME

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18ARC63

Sixth Semester B.Arch. Degree Examination, Dec.2023/Jan.2024 Building Services – III

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing one full question from each module.
2. Draw sketches with descriptions wherever necessary.*

Module-1

- 1 a. Discuss the various systems of mechanical ventilation with neat sketches. (10 Marks)
b. Briefly explain the basic requirements of load calculations in design of HVAC units. (10 Marks)

OR

- 2 a. What is psychrometric process? Explain various psychrometric terms with sketches. (10 Marks)
b. With a neat sketch, explain zoning and air distribution system. (10 Marks)

Module-2

- 3 a. Explain refrigeration cycle with the help of a schematic diagram. (10 Marks)
b. Briefly explain the preferred locations and architectural requirements in design of HVAC units. (10 Marks)

OR

- 4 a. Briefly explain the specialized air conditioning systems in various utilities. (10 Marks)
b. With a neat sketch explain packaged and centralized air conditioning systems. (10 Marks)

Module-3

- 5 a. With a neat sketch, explain double decker and machine roomless elevator. (10 Marks)
b. Briefly explain various design consideration of elevator systems. (10 Marks)

OR

- 6 a. With a neat sketch, explain working of escalators. (10 Marks)
b. Explain with sketches grouping of elevators. (10 Marks)

Module-4

- 7 a. Discuss the role of architect in ensuring the fire safety in building. (08 Marks)
b. Briefly describe on characteristic of combustible and non-combustible materials as per NBC guidelines. (12 Marks)

OR

- 8 Write a short note on following with sketches:
i) Fire escape staircase
ii) Smoke detector
iii) Fire Signages
iv) Fire refuge area. (20 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

Module-5

- 9 a. Elaborate on various rules for fire protection and fire fighting requirements in high rise buildings. (12 Marks)
b. Elaborate on significance of alarm systems used in buildings. (08 Marks)

OR

10 Write a short note on following:

- a. Fire Fighting Installations
b. Fire sprinklers
c. Fire hydrants
d. Automatic fire detections.

(20 Marks)
