21ARC55

Fifth Semester B.Arch. Degree Examination, Dec. 2023 Jan. 2024 Building Service - III

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 Draw and explain refrigeration cycle. (20 Marks)

Describe the various A/C systems. Draw with neat sketches. 2

(20 Marks)

Module-2

Explain Direct and Indirect Cooling.

(10 Marks)

Explain Summer and Winter A/C systems with neat sketches.

(10 Marks)

OR

Write short work on: 4

(20 Marks)

AHU

Fan -Coil Unit b)

Clean Room Concept

De - Humidifier

Module-3

5 Explain the following:

d)

- Types of elevator system
- Architectural Requirement
- Arrangement of Elevators Lift Acts and NBC

(20 Marks)

Explain Hydraulic elevator and Traction elevator with neat sketches. 6

(20 Marks)

Module-4

Explain fire triangle. What are the various types of fire classifications? 7

(10 Marks)

Explain Grading of structural elements for its fire resistance as per NBC.

(10 Marks)

Explain Passive fire protection system in Buildings. 8

(20 Marks)

Module-5

Explain the working of Automatic sprinkles system and fire hydrants. 9

(10 Marks)

Explain the roles for fire protection and fire fighting requirements for high rise building in (10 Marks)

OR

10 Write short notes on:

- Fire Doors
- b) Fire Scalants
- Smoke curtains c)
- Fire alarms

(20 Marks)

2. Any revealing of identification, appeal to evaluator and for equations written eg, 42+8 = 50, will be treated as malpractice.

Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages