

Total number of printed pages-4

43 (ARC-5) 5.6

2018

BUILDING SERVICES-III

Paper : ARC 5.6

Full Marks : 100

Pass Marks : 40

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Each carry 1 marks (for each blank) 1×10=10
- (a) HVAC is commonly referred as _____, _____, _____.
 - (b) Function of refrigeration cycle is to _____
 - (c) Function of compressor _____
 - (d) Function of condenser _____
 - (e) Function of evaporator _____

Contd.

(f) Hoistway is used for _____

(g) Counter weight is used _____

2. Answer the following: **(2 marks each)**

2×10=20

(i) Principal parts of *any one* lift.

(ii) What is a Piston?

(iii) Draw the arrangement of 6 lift.

(iv) Types of door in a lift.

(v) Mention the minimum car width, depth & height in a lift.

(vi) Automatic sprinkler and its types.

(vii) Fire fighting foam.

(viii) Advantages of elevator.

(ix) Lift arrangement for different types of car.

(x) Crisscross elevator.

3. Write short notes of the following: **(any six)**
5×6=30

(i) Air Handling Unit

(ii) Four main aspects of HVAC

(iii) Refrigeration cycle

(iv) Functions of HVAC

(v) Different types zoning for centralized AC

(vi) Types of AC

(vii) What is wet riser and dry riser?

(viii) Types of Elevator.

4. Explain with needful sketches: **(any four)**
10×4=40

(i) Explain the components of Traction Elevator along with the sizes of the component and typical plan layout.

(ii) What are the different types of Escalator? Explain with labelled diagram "Principal part of Standard Escalator".

- (iii) Discuss the design of escape routes for fire protection in buildings.
- (iv) Explain Air Distribution Method/Air cycle with labelled diagram.
- (v) Discuss the causes of fire and fire fighting equipment in detail.
- (vi) Define Double Deck and Sky Lobby with labelled sketches explaining—
- Components and working principle
 - Plan, section and elevation
 - Probable location and arrangement in buildings
 - Applications
 - Space specification if any.