

Paper Id:

181516

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BARCH
(SEM-V) THEORY EXAMINATION 2019-20
ARCHITECTURAL SERVICES-IV/III

Time: 3 Hours**Total Marks: 50**

- Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.
 2. Make neat sketches to support your answers.

SECTION A

1. **Attempt all questions in brief.** **2x5 = 10**
- a. What is the difference between Lifts and Escalators?
 - b. What is Cooling tower?.
 - c. What are dampers in an air distribution system?
 - d. What is the unit of air conditioning?
 - e. What is a Duct in Air-conditioning system?

SECTION B

2. **Attempt any five of the following:** **3 x 5 = 15**
- a. Explain Psychometric chart in detail with examples.
 - b. Discuss the safety systems incorporated in a Lift.
 - c. Discuss the various components in an air distribution system.
 - d. Explain evaporative cooling system. Discuss the passive application of it in architectural design
 - e. Discuss the classification of lifts based on usage.
 - f. What is Thermal Comfort? Discuss various factors that affect Human Comfort.
 - g. What are dehumidifiers? Discuss their working in brief.
 - h. What are Travellators? where and why they need to be provided?

SECTION C

3. **Attempt any one part of the following:** **5 x 1 = 5**
- (a) Explain an AHU with the help of a typical cross section.
 - (b) Sketch a typical section through a lift.
4. **Attempt any one part of the following:** **5 x 1 = 5**
- (a) Suggest and elaborate in detail the working of the type of air-conditioning system that should be provided in a commercial Office complex.
 - (b) Explain in detail the complete refrigeration cycle.
5. **Attempt any one part of the following:** **5 x 1 = 5**
- (a) Discuss the two types of Lifts systems in. Support your answer with sketches.
 - (b) Discuss traction lifts and elaborate on its various components.
6. **Attempt any one part of the following:** **5 x 1 = 5**
- (a) Discuss the design consideration for location and arrangements of lifts in any commercial building.
 - (b) What are the various types of air conditioning systems? Discuss the difference between unitary and central air conditioning systems
7. **Attempt any one part of the following:** **5 x 1 = 5**
- (a) What is an escalator? Discuss the various components of an escalator.
 - (b) Discuss the various lift control operations systems.