

BACHELOR OF ARCHITECTURE (B.Arch.)

Term-End Examination

00230

June, 2016

**BAR-059 : ARCHITECTURAL SCIENCES &
SERVICES – IV (ENERGY SYSTEMS AND HVAC)**

Time : 3 hours

Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal marks. Draw neat sketches wherever necessary.

1. Draw labelled sketches and explain in detail the layout systems of lighting, fans and telephones of a residential building. Discuss the various systems of wiring for the above residence. 14

2. (a) Write down the various Fire Regulations for various types of high rise public buildings. 8
- (b) Define the following : 6
 - (i) Fire extinguishing systems
 - (ii) Fire resistance of different building materials
 - (iii) Warning systems in public buildings

3. How do the various parameters affect the design of air-conditioning load of a building ? Signify the importance of Psychrometric chart in designing of Air-Conditioning Load. 14
4. (a) Write short notes on the following :
- (i) Handling capacity of lifts 2
 - (ii) Factors affecting lift speed 2
- (b) Define escalators. Draw a schematic diagram to illustrate its working and operation mechanism. 10
5. What is an air-conditioning system ? Discuss in detail the various systems in current use from chilled water cooling systems to air handling package units. 14
6. Write short notes on any *two* of the following : $2 \times 7 = 14$
- (a) Fire regulations
 - (b) Layout of two-way switch
 - (c) Planning of buildings for fire escapes
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