

**BACHELOR OF ARCHITECTURE (BARCH)**

**Term-End Examination**

**June, 2011**

**BAR-059 : ENERGY SYSTEMS AND HVAC**

*Time : 3 hours*

*Maximum Marks : 70*

*Note : Attempt any five questions. All questions carry equal marks. Draw sketches where necessary.*

1. Write down the various types of wiring systems. 14  
Suggest appropriate wiring system for the following:
- (a) Residential building
  - (b) A multistorey building
2. (a) Draw the symbols of : 5
- (i) One way switch
  - (ii) Earthing
  - (iii) Fuse
  - (iv) Bulb
  - (v) Electricity meter
  - (vi) Two way switch
  - (vii) Switch Board
  - (viii) Bell
  - (ix) Tube light
  - (x) Ceiling fan
- (b) What is earthing and why it is provided ? 9  
Discuss the various types of earthing.

3. (a) Discuss the requirement of a sub-station of electricity. 7  
(b) Suggest the electrical installations for a drawing room with neat sketches. 7
4. Discuss the various types of fire fighting systems. Also discuss their appropriate use. 14
5. (a) Discuss the various fire regulations and code of safety. 7  
(b) What do you understand by fire resistance of different materials ? 7
6. (a) Define Comfort Zone. Explain the various parameters of the Comfort Zone. 7  
(b) Discuss the characteristics of psychometric chart. 7
7. (a) Suggest and sketch the appropriate layout of air conditioning duct for computer centre. 7  
(b) Discuss the basis of calculating the tonnage of an air conditioner. 7
8. Write short notes on *any two* : 7x2=14  
(a) Lightening conductor  
(b) Use of moving walkways and escalators  
(c) Fire lift.
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