

BACHELOR OF ARCHITECTURE (B.Arch.)

Term-End Examination

June, 2019

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

Time : 3 hours

Maximum Marks : 70

Note : (i) Attempt any five questions.

(ii) All questions carry equal marks.

(iii) Draw neat sketches wherever necessary.

1. Write short notes on any four of the following :
 - (a) Overload 4x3½=14
 - (b) Short-circuit
 - (c) Circuit-breakers
 - (d) Air Break Switch
 - (e) Fuses

2.
 - (a) Discuss the electrical distribution systems in a residential building. 2x7=14
 - (b) Discuss the various systems for electrical wiring in a high rise building.

3. Discuss the various Design considerations for Five Protection Requirements in a high-rise building. 14

4. What is HVAC ? Write about the basics of HVAC design, with respect to comfort principles and other affecting factors. 14

5. Define Escalators. Write about escalator configurations including : single bank, criss-cross and parallel escalator arrangements. 14

6. What are the different types of sprinkler systems? Write in detail about the sprinkler head design and activation mechanism. 14
 7. Define psychometric chart. Explain the significance of psychometric chart in designing air conditioning load. 14
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