CBCS SCHEME

Acharya's NRV School of Architecture LIBRARY Bangalore

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18ARC53

Fifth Semester B.Arch. Degree Examination, Feb./Mar. 2022
Building Services – II

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-1

1 a. Explain the following basic concepts :
i) Electricity ii) Ohm's law iii) Power
iv) Alternating current v) Connected load vi) Load factor. **(12 Marks)**

b. Explain the importance of electrical energy in the development of nation. **(08 Marks)**

OR

2 a. Explain the transmittance of electric power form generating station to consumer point with suitable diagram. **(10 Marks)**

b. Explain the basic working principle of a transformer with a neat sketch an list the different applications of a transformer. **(10 Marks)**

Module-2

3 a. Write a short note on UPS requirement explaining offline and online UPS systems. **(08 Marks)**

b. Discuss the following wiring systems :
i) Cleat wiring system
ii) Batten wiring system
iii) Conduct wiring system. **(12 Marks)**

OR

4 a. Explain the following distribution systems according to the scheme of connection :
i) Radial ii) Ring vain iii) Interconnected distribution system. **(12 Marks)**

b. Discuss the overhead Vs underground distribution systems. **(08 Marks)**

Module-3

5 Writ short notes on :
i) Need for protection system in electrical distribution systems
ii) MCB
iii) MCCB
iv) Air Circuit Breaker. **(20 Marks)**

OR

6 a. What do you mean by earthing and explain the necessity of earthing. **(08 Marks)**

b. Explain the construction and working principle of plate earthing with a neat sketch and their parts. **(12 Marks)**

Module-4

7 a. Write short notes on :
i) Incandescent lamp
ii) Fluorescent lamp **(10 Marks)**

b. State and explain the laws of Illumination. **(10 Marks)**

OR

8 Write short notes on :
i) Ambient lighting
ii) Task lighting
iii) Accent lighting
iv) Street lighting **(20 Marks)**

Module-5

9 a. What is Extra low voltage system? **(10 Marks)**
b. Explain the three Extra low voltage systems. **(10 Marks)**

OR

10 a. Draw a single line diagram of a two bedroom residence and prepare the electrical layout using standard symbols. **(14 Marks)**
b. Calculate the electrical load for the lighting of the residence. **(06 Marks)**

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