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Fifth Semester B.Arch. Degree Examination, July/August 2022 Building Services – II

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Define Electricity. Discuss various consideration involved in planning of electrical services in a buildings. (10 Marks)
b. Explain the distribution of electricity from generating station to consumer place with neat diagram. (10 Marks)

OR

- 2 Write a brief note on following:
a. AC and DC
b. Underground and over head transmission
c. Transformers
d. Single phase and three phase current. (20 Marks)

Module-2

- 3 a. Briefly explain the importance of substation. Write the difference between Indoor and out door substation. (12 Marks)
b. Write brief note on UPS power requirements. (08 Marks)

OR

- 4 a. What do you understand by “Net Zero building” elaborate in detail how can you achieve it using building design through utilization of renewable energy systems. (12 Marks)
b. What is the difference between power back up sources-generator and UPS for a buildings? (08 Marks)

Module-3

- 5 a. Briefly explain the importance of earthing also highlight the factors affecting earthing system. (10 Marks)
b. Name different methods of earthing explain any one in detail. (10 Marks)

OR

- 6 a. Briefly explain the importance of protective devices. (10 Marks)
b. Explain the working principle of fuse and MCB. (10 Marks)

Module-4

- 7 a. Define and explain briefly:
i) Luminous flux and luminous intensity. (15 Marks)
ii) Illumination and efficacy. (15 Marks)
b. List the common and recommended light levels required for indoor as per NBC. (05 Marks)

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.

OR

- 8 a. Explain the various methods of lighting. (10 Marks)
b. Compare any four types of lamps commonly used in terms of application, efficacy, average life advantages and disadvantages. (10 Marks)

Module-5

- 9 Give a detailed note on extra low voltage system and explain their relevance and importance. (20 Marks)

OR

- 10 With a standard electrical notations/symbols design electrical layout for a independent one floor 2BHK house considering lighting and electrical requirements for both indoor and outdoor.
Calculate total connected load and suggest the required sanction load considering maximum demand. (20 Marks)
