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Fifth Semester B.Arch. Degree Examination, Jan./Feb.2021 Building Services – II

Time: 3 hrs.

Max. Marks: 100

**Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Draw neat sketches where necessary.**

Module-1

- 1 a. Elaborate on the importance of electrical services in 2 building emphasizing on the implications on the design. (10 Marks)
 b. Enumerate the guidelines laid out by NBC and NEC with respect to electrical design in a building. (10 Marks)

OR

- 2 Write notes on salient aspects of : (20 Marks)
 a. HT and LT panel.
 b. Sub stations.
 c. Transformer.
 d. Source for electricity generation.

Module-2

- 3 a. Discuss the electrical distribution system in a highrise office complex. (12 Marks)
 b. What are the basics and highlights of an UPS system? (08 Marks)

OR

- 4 Write short notes on: (10 Marks)
 a. Net zero buildings. (10 Marks)
 b. Renewable energy systems.

Module-3

- 5 Why are protective devices necessary in an electrical system in a building? Demonstrate with any three in detail. (20 Marks)

OR

- 6 What are earthing and lighting protective systems? Discuss each with types, selections, specifications as per NBC/other relevant codes. (20 Marks)

Module-4

- 7 a. Discuss the various types of lamps available and their apt applications. (10 Marks)
 b. What are the possibilities of designing lighting methods for different activities or needs? (10 Marks)

OR

- 8 Write notes with illustrations on: (10 Marks)
 a. Landscape lighting. (10 Marks)
 b. Systems of Luminaries.

Module-5

- 9 What do you mean by 'Extra-Low voltage systems? Discuss the various systems in an apartment building. (20 Marks)

OR

- 10 Write notes on: (10 Marks)
 a. Load estimation and Calculations. (10 Marks)
 b. Local Building Codes. (10 Marks)

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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.