

Fourth Semester B.Arch. Degree Examination, June/July 2025 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 Explain the following terms :

- i) Electrical current
- ii) Voltage
- iii) Maximum demand
- iv) Connected load
- v) Electrical resistance.

(20 Marks)

OR

- 2 a. Enlist the different codes and standards followed for electricity in building construction discuss any four broad features related to electricity in the national building code. (10 Marks)
- b. Explain the transmission of electric power from generation station to consumer with a neat diagram. (10 Marks)

Module-2

3 Explain the following with respect to electric cabling :

- a. Voltage levels in buildings
- b. Energy metering in buildings.

(20 Marks)

OR

- 4 What is a Net Zero energy building? Discuss the opportunities of energy conservation in the building. (20 Marks)

Module-3

- 5 Discuss the need of protective devices in electrical layout. Enlist the protective devices elaborating on any two. (20 Marks)

OR

- 6 a. What is meant by earthing? Why is earthing essential for a building? (02 Marks)
- b. Explain the different types of earthing. (05 Marks)
- c. Explain primary function of earthing by elaborating one type in detail. (13 Marks)

Module-4

- 7 a. What is illumination and lux levels in brief state and explain the illumination laws. (10 Marks)
- b. Explain the following : i) Accent lighting ii) Task lighting. (10 Marks)

OR

- 8 Provide the lighting plan for a design studio of size 10 m × 15 m × 3.5 m. Justify the choice of luminaries, letups voltage levels and positioning with part plan calculations, electrical – lighting layout with sections. (20 Marks)

Module-5

- 9 Draw a single plan of an electrical layout of doctors clinic and estimate the load for the same. (20 Marks)

OR

- 10 What are extra low voltage device systems? Discuss the different components of the elu system. (20 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.

