

CBCS SCHEME

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18ARC53

Fifth Semester B.Arch. Degree Examination, June/July 2023 Building Services – II

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Support the answers with sketches.

Module-1

- 1 Define the electricity distribution from the generation station to the end user with a flow chart. Mention the voltage levels at each transmission and distribution station. (20 Marks)

OR

- 2 Write short notes on :
a) Short circuit
b) Closed circuit
c) Renewable energy
d) Parts of cable (20 Marks)

Module-2

- 3 a. Identify the parts of the generator and its working. (10 Marks)
b. Differentiate between rising main, circuit mains and sub mains. (10 Marks)

OR

- 4 Write short notes on :
a) UPS
b) Conduit wiring
c) Solar power stations
d) Energy conservation techniques in electrical systems (20 Marks)

Module-3

- 5 a. Describe the need for protective device in building and elaborate on Faraday's cage. (10 Marks)
b. Recognize the functioning and parts of a circuit breaker and its need in the building. (10 Marks)

OR

- 6 a. Appraise the need for earthing protective devices in buildings and elaborate on pipe earthing. (10 Marks)
b. Interpret the functioning of Franklin rods with a neat sketch. (10 Marks)

Module-4

- 7 Critically analyze the application of Ambient, Accent & Task lights in building with examples. (20 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. The point source has an intensity of 2000 candela in all directions and is mounted 4m above the ground. Calculate the Illuminance on the surface directly underneath and at a distance of 3m to the side. (20 Marks)

Module-5

- 9 Draw an electrical layout for a room and attached bathroom and calculate the connected load considering the following :

Room			Toilet		
Sl No.	Equipment	Nos.	Sl. No.	Equipment	Nos.
1	Lights	2	1	Lights	2
2	Fan	1	2	Exhaust fan	1
3	Plug 5amp	1	3	Plug 5 amp	1
4	Telephone	1	4	Geyser	1

(20 Marks)

OR

- 10 Define the types of low voltage electrical systems in buildings. (20 Marks)
