CBCS SCHEME

USN | | | | | | | | | | |

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)**

OR

8 a. The point source has an intensity of 2000 candela in all directions and is mounted 4m above
b. 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)**

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