CBCS SCHEME

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

18ARC53

Fifth Semester B.Arch. Degree Examination, July/August 2021
Building Services – II

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions.***

1 a. Explain the importance of electrical services and its implication on building design. **(10 Marks)**

b. Explain in detail about the various Codes, Acts and Standards governing electrical services in India. **(10 Marks)**

2 a. Explain the sketch any one renewable source for electricity generation. **(10 Marks)**

b. Explain the working principle of a transformer with sketch and its types. **(10 Marks)**

3 a. Explain how is electricity distributed inside a high rise residential building premises, with the help of section. Mention distributed volts at each stage. **(12 Marks)**

b. What is UPS? Explain the basic components of UPS, with the working principle along with a sketch. **(08 Marks)**

4 a. What are NZEB? Explain with a sectional sketch the features of a NZEB Home. **(10 Marks)**

b. Explain the energy conservation technique in electrical systems. **(10 Marks)**

5 a. Explain the need of protective devices in building electrical systems and their selection criteria. **(10 Marks)**

b. Define a fuse and explain with sketches, any two types of fuses in detail with its advantages. **(10 Marks)**

6 a. Explain importance of earthing system in the buildings. Explain the plate earthing system with sketch. **(12 Marks)**

b. Explain the importance and method of lighting protection system with neat sketch. **(08 Marks)**

7 a. What are the factors to be considered while designing an indoor lighting scheme to maintain good quality and quantity of lighting? **(10 Marks)**

b. Explain various methods used for integration of day-lighting with artificial lighting and its advantages with sketches. **(10 Marks)**

8 a. Explain different methods of lighting and its applications. **(06 Marks)**

b. What is Luminare? What are its components? Explain the systems of Luminaries with sketches. (Explain intent quality and where are the used). **(14 Marks)**

9 a. What is an extra low voltage system? **(05 Marks)**

b. Explain the 3 types of ELVS used in a building with examples. **(15 Marks)**

10 a. Draw an electrical layout for a 2 BHK individual residence showing the following points :
i) Lights ii) Fans iii) Power points
iv) Low voltage points v) Distribution board and meter board. **(15 Marks)**

b. Calculate the electrical load for the above layout. **(05 Marks)**

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