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

18ARC53

Fifth Semester B.Arch. Degree Examination, July/August 2022
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 a. Define Electricity. Discuss various consideration involved in planning of electrical services in a buildings. **(10 Marks)**

b. Explain the distribution of electricity from generating station to consumer place with neat diagram. **(10 Marks)**

OR

2 Write a brief note on following:

a. AC and DC

b. Underground and over head transmission

c. Transformers

d. Single phase and three phase current. **(20 Marks)**

Module-2

3 a. Briefly explain the importance of substation. Write the difference between Indoor and out door substation. **(12 Marks)**

b. Write brief note on UPS power requirements. **(08 Marks)**

OR

4 a. What do you understand by "Net Zero building" elaborate in detail how can you achieve it using building design through utilization of renewable energy systems. **(12 Marks)**

b. What is the difference between power back up sources-generator and UPS for a buildings? **(08 Marks)**

Module-3

5 a. Briefly explain the importance of earthing also highlight the factors affecting earthing system. **(10 Marks)**

b. Name different methods of earthing explain any one in detail. **(10 Marks)**

OR

6 a. Briefly explain the importance of protective devices. **(10 Marks)**

b. Explain the working principle of fuse and MCB. **(10 Marks)**

Module-4

7 a. Define and explain briefly:

i) Luminous flux and luminous intensity.

ii) Illumination and efficacy. **(15 Marks)**

b. List the common and recommended light levels required for indoor as per NBC. **(05 Marks)**

OR

8 a. Explain the various methods of lighting. (10 Marks)

b. Compare any four types of lamps commonly used interms of application, efficacy, average life advantages and disadvantages. (10 Marks)

Module-5

9 Give a detailed note on extra low voltage system and explain their relevance and importance. (20 Marks)

OR

10 With a standard electrical notations/symbols design electrical layout for a independent one floor 2BHK house considering lighting and electrical requirements for both indoor and outdoor.

Calculate total connected load and suggest the required sanction load considering maximum demand. (20 Marks)

* * * * *