

CBCS Scheme

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15ARC5.3

Fifth Semester B. Arch Degree Examination, Dec.2017/Jan.2018

Building Services - II

Time: 3 hrs.

Max. Marks: 100

Note: Answer FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. What is electricity? Explain with sketch any one method of generating electricity. (05 Marks)
b. Explain Sub-station its function and types. (15 Marks)

OR

- 2 Write short notes on any 5 (five) of the following :
a. Transformer
b. Generator
c. Primary and secondary distribution line
d. HT and LT cables
e. Metering Panel and HT panel
f. A.C and DC
g. National Electric code and I.S Rules. (20 Marks)

Module-2

- 3 a. Explain the electrical wiring system and electrical wiring installation system with sketches. (12 Marks)
b. List the general ISI Rules related to wiring. (08 Marks)

OR

- 4 a. What do you mean by Net zero energy building? Explain with a sectional sketch the features of a NZEB Home. (10 Marks)
b. What are the various on site and off site renewable energy systems? Explain with sketches. (10 Marks)

Module-3

- 5 a. What are protective devices? Why are they necessary for electrical wiring? Explain MCB and ELCB with sketches. (10 Marks)
b. Define a Fuse. Explain with sketches any two types of fuses in detail its advantages. (10 Marks)

OR

- 6 a. What is Earthing? Why is it necessary? Explain with sketch any one type of earthing. (10 Marks)
b. Explain with sketch the method of lighting protection system in a building. Explain the importance of the same. (10 Marks)

Module-4

- 7 a. What is Lighting? Why are the factors contributing to good lighting? (08 Marks)
b. Discuss in detail different lighting systems with neat sketches. And their applications. (06 Marks)

- c. Explain with system of luminaries.

(06 Marks)

OR

- 8 Write short notes on any 5 (Five) :

- a. Laws of illumination
- b. Glare
- c. Types of Lamps
- d. Sodium vapour Lamp and Mercury vapour lamp
- e. Fluorescent Lamp and CFL
- f. Lighting Schemes
- g. Façade Light and Landscape Lighting.

(20 Marks)

Module-5

- 9 a. With is Extra Low – Voltage system. Explain its necessity in a building?
b. Explain any 3 – types of Low voltage systems used in buildings in detail.

(08 Marks)

(12 Marks)

OR

- 10 a. For a 3-BHK individual residence prepare an electrical layout showing the following :
– Light points
– Fans
– Power Points
– Low voltages points
– Distribution Board and meter board.
b. Calculate the electrical load for the same.

(14 Marks)

(06 Marks)
