

# CBCS Scheme

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## Fifth Semester B.Arch. Degree Examination, June/July 2018 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 your answer with neat sketches.**

### Module-1

- 1 a. Define electricity? Discuss various considerations involved in planning of electrical services in a building. (10 Marks)  
b. What is meant by sub-station? Discuss the functions and classifications of sub-stations. (10 Marks)

OR

- 2 a. Explain the distribution of electricity from generating station to consumer unit with a neat diagram. (10 Marks)  
b. What is a transformer? Explain its principle of operation and classifications based on type of cooling with sketches. (10 Marks)

### Module-2

- 3 a. Discuss different methods of wiring installation systems in buildings with sketches. (15 Marks)  
b. List the general ISI rules related to building wiring. (05 Marks)

OR

- 4 a. What are the renewable sources of energy? Explain any two methods of electricity generation from renewable sources with the help of block diagrams. (15 Marks)  
b. Explain the measures that can help conserve electricity in buildings. (05 Marks)

### Module-3

- 5 a. Explain the need of protective devices in building electrical system and their selection criteria. (10 Marks)  
b. Write short notes, with the help of sketch on :  
i) MCB  
ii) Fuses and its types. (10 Marks)

OR

- 6 a. What is Earthing? Explain its importance in buildings. (04 Marks)  
b. Explain the plate Earthing method with the help of a neat sketch. (16 Marks)

**Module-4**

- 7 a. Explain in brief, the principles and applications of the following lighting :  
i) Ambient lighting  
ii) Task lighting. (10 Marks)
- b. Write short notes with sketches on :  
i) Incandescent lamps  
ii) Fluorescent lamps. (10 Marks)

**OR**

- 8 a. Design considerations for interior lighting. (08 Marks)  
b. What are the factors to be considered for good lighting quality? (12 Marks)

**Module-5**

- 9 a. What is extra – low voltage system? (05 Marks)  
b. Explain 3 low voltage systems. (15 Marks)

**OR**

- 10 Draw single line sketch of a single –bed room residential building and prepare the electrical layout for the same, using standard electrical symbols (like showing light points, fan points, power points, meter boards etc). Mention legend of symbols used for above plan. (20 Marks)

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