

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

**CLASS: B.ARCH
BRANCH: ARCHITECTURE**

**SEMESTER: V/ADD
SESSION : MO/2019**

SUBJECT : AR5301 BUILDING SERVICES - III (ELECTRICAL & LIGHTING)

TIME: 1.5 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 30.
 2. Candidates may attempt for all 30 marks.
 3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. The missing data, if any, may be assumed suitably.
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- Q1 (a) What are the different sources of energy generation? [2]
(b) Discuss the Role of Transformer in Electrical distribution System. [3]
- Q2 (a) Differentiate between Overhead lines and Underground cables. [2]
(b) Explain the distribution system of electricity starting from grid generation to an individual House using flow chart. [3]
- Q3 (a) Draw a sketch of Hydroelectric Power Plant. [2]
(b) Discuss briefly the three types of domestic wiring system, also discuss about the advantages and disadvantages of each of them? [3]
- Q4 (a) What is Glare? Explain the various types of glare. [2]
(b) Write short note on the following: [3]
(i) Transformer (ii) Distribution Box.
- Q5 (a) Define 'Earthing', why it is needed in the buildings? [2]
(b) Explain briefly the typical arrangement of Plate Earthing using proper sketches. [3]
- Q6 (a) Explain the general principles of planning of an electrical wiring installation [2]
(b) Explain the schematic electrical layout plan for one 2 BHK Flat of a multi-storeyed building, Showing the wiring diagram and the different installations. [3]

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