

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

**CLASS: BARCH
BRANCH: ARCH.**

**SEMESTER: VII
SESSION : MO/2018**

SUBJECT : AR7305 BUILDING SCIENCE -II(ENERGY EFFICIENT BUILDING)

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.
-

- Q1 (a) Describe the role of an Architect in energy saving of a building. [2]
(b) Explain the various energy needs of a building while functioning. [3]
- Q2 (a) Write short notes on present Energy scenario of India. [3]
(b) Differentiate between renewable and nonrenewable energy sources. [2]
- Q3 (a) Describe three major Energy Factors related to building design. [3]
(b) What are the steps to be followed for energy audit of a building? [2]
- Q4 Elaborate the factors affecting thermal and visual performance of a building. [5]
- Q5 Write short notes of the following: [5]
1. Embodied Energy
2. U Factor
- Q6 Explain with illustrations the basic architectural design considerations to be followed to make the building energy efficient. [5]

:::: 10/09/2018 M :::::