

**M.ARCH. (SUSTAINABLE ARCHITECTURE) SEM. – I  
(CBCS – 2018 COURSE) : SUMMER - 2019  
SUBJECT : ENERGY MANAGEMENT & AUDIT**

**Day** : Tuesday  
**Date** : 07/05/2019

**Time** : 02.00 PM TO 04.00 PM  
**Max. Marks** : 60

S-2019-3745

**N.B.**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Answer to both the sections should be written in **SEPARATE** answer book.
- 4) Assume suitable data and draw figures if necessary.

**SECTION - I**

- Q.1** Write short notes on **(ANY TWO)** **(10)**
- a) Differentiate between Energy Conservation and Energy Efficiency with suitable example.
  - b) What is the objective of energy management?
  - c) Explain the terms Fusion, Melting Point and Vaporization of a substance.
- Q.2** Explain in brief / Describe the following terms in detail **(ANY TWO)** **(10)**
- a) Define the terms 'Temperature' and 'Pressure'.
  - b) What is the significance of an energy policy?
  - c) Explain 'Law Of Conservation Of Matter'.
- Q.3** Answer the following **(ANY ONE)** **(10)**
- a) Explain the strategies for better energy security of the nation.
  - b) List down steps involved in 'Detailed Energy Audit'.

**SECTION - II**

- Q.4** Write short notes on **(ANY TWO)** **(10)**
- a) ESCOs
  - b) Differentiate Exothermic and Endothermic reactions with suitable examples.
  - c) What are the impacts of Ozone Layer Depletion?
- Q.5** Explain in brief / Describe the following terms in detail **(ANY TWO)** **(10)**
- a) How material and energy balance helps in energy conservation.
  - b) List down the advantages with 'Simple Payback Period' technique.
  - c) Calculate the present value of tax cash flow from a Rs. 10,000 investment towards 5 hp energy efficient motor with 30% declining balance depreciation rate, 50% tax rate and 10% interest rate.
- Q.6** Answer the following **(ANY ONE)** **(10)**
- a) Explain the need for Measurement And Verification in a project management system.
  - b) Explain with diagram 'What is CPM and list the steps in CPM project planning'.

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