

**B. SC. (APPLIED SCIENCE-
ENERGY)**

(BSCAEY)

Term-End Examination

June, 2026

**BEY-005 : ENERGY EFFICIENCY AND
MANAGEMENT**

Time : 3 Hours

Maximum Marks : 70

Note : (i) Attempt any **seven** questions.

(ii) All questions carry equal marks.

1. (a) What is Energy Audit ? How does a commercial energy audit differ from an industrial energy audit ?

(b) Discuss the objectives and strategies of National Action Plan on Climate Change (NAPCC). 5+5=10

2. Discuss a real-world application where PERT analysis would be beneficial in managing project complexity and risk. 10
3. Distinguish between any *two* of the following : $2 \times 5 = 10$
 - (a) Fixed bed and Fluidized bed combustion
 - (b) Fire tube boilers and water tube boilers
 - (c) Forging furnace and retrolling mill furnace
4. Explain the functions of an economizer and regenerator. How do they help in increasing the efficiency of a boiler ? 10
5. (a) Define Demand Size Management (DSM). What are the benefits of (DSM) ?
 - (b) Discuss various distribution losses in Industrial System. $5 + 5 = 10$
6. (a) Describe the field tests for determining motor efficiency in brief.
 - (b) Explain the electricity billing system in brief. $5 + 5 = 10$
7. (a) Describe energy efficient motors in brief.

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- (b) Discuss the effect of rewinding of motor on energy efficiency. $5+5=10$
8. (a) Explain the working principle of a heat pump with the help of a neat sketch.
- (b) How will you conduct the energy audit of your home ? $5+5=10$
9. Write short notes on any *four* of the following : $4 \times 2.5 = 10$
- (a) Good house-keeping measures for energy conservation
- (b) Power factor
- (c) Smart meter
- (d) Heat exchanger
- (e) Control of furnace draft
- (f) ESCO contract

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