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BEY–005

BACHELOR OF SCIENCE

(APPLIED SCIENCE–ENERGY)

(BSCAEY)

Term-End Examination

December, 2025

BEY-005 : ENERGY EFFICIENCY AND MANAGEMENT

Time : 3 Hours *Maximum Marks : 70*

Note : *Attempt any* ***seven*** *questions. All questions carry equal marks.*

1. (a) What challenges might arise when selecting and using instrumentation for energy audits and how can they be mitigated ? 5

   (b) Discuss the aims and objectives of Electricity Act, 2003. 5

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2. Describe the various project planning techniques in detail. 10

3. Explain in brief about coal combustion technology. 10

4. (a) Discuss the various parameters which affect boiler performance. 5

   (b) How is furnace draft controlled ? Explain with a neat sketch. 5

5. Explain in detail about various transmission and distribution losses. 10

6. (a) How can we control the speed of AC induction motor ? 5

   (b) What is regenerator ? How does it help in increasing efficiency ? 5

7. (a) What could be the possible reasons of increased electricity consumption in the month of June in New Delhi ? 5

   (b) What is evaporative cooling ? Are desert coolers suitable for all climates ? Justify your answer. 5

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8. Discuss the working principle of vapor compression heat pumps with neat sketch. 10

9. Write short notes on any *two* of the following : 5+5

   (a) Material and energy balance

   (b) Adiabatic flame temperature

   (c) I^2R losses

   (d) Maximum demand control

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