

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

Term-End Examination

June, 2026

BEY-002 : ENERGY RESOURCES

Time : 3 Hours

Maximum Marks : 70

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

(ii) All questions carry equal marks.

1. Distinguish between any **four** of the following : $4 \times 2.5 = 10$
 - (i) Renewable and non-renewable energy.
 - (ii) Nuclear fission and Nuclear fusion
 - (iii) Proximate analysis and ultimate analysis.
 - (iv) Horizontal axis wind turbine and vertical axis wind turbine.
 - (v) Fixed dome and Floating drum biogas plants.

2. (a) Classify different types of coal and explain the process of coalification.
(b) What are the additives ? How do they effect the performance of any fuel ? 5+5
3. (a) Explain in brief the status of renewable energy resources in India.
(b) Describe the function of control rods in a nuclear power plant. 5+5
4. (a) Describe the working of a pyranometer with the help of a neat sketch.
(b) Discuss the various low power applications of a solar PV system. 5+5
5. (a) What is Solar thermal technology ? How does a flat plate solar water heater work ?
(b) How is wind generated ? What are the important characteristics of the wind resource ? 5+5
6. (a) Discuss the important features for the selection of a site for hydro power plant.
(b) What are the fundamental ways of harnessing wave energy ? Explain any one of them in brief. 5+5
7. (a) Discuss the various resources of biomass in detail.

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- (b) Explain the environmental and economic benefits of biogas. 5+5
8. (a) Describe the various biomass conversion pathways in brief.
- (b) Discuss the direct applications of geothermal energy. 5+5
9. Write short notes on any **two** of the following : 5+5
- (a) Global status of oil reserves
- (b) Geysers Geothermal power plant
- (c) Solar cooker
- (d) Reaction turbine

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