

**MASTER OF SCIENCE
(RENEWABLE ENERGY AND
ENVIRONMENT) (MSCRWEE)**

Term-End Examination

June, 2026

**MRW-007 : ENERGY ECONOMICS AND
PLANNING**

Time : 3 Hours

Maximum Marks : 70

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

(ii) All questions carry equal marks.

(iii) Use of scientific calculator is permitted.

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1. (a) Explain the major characteristics of a scientific management.
- (b) Discuss the factors that govern producers behaviour with respect to output and price. 7+7

2. Distinguish between any *four* of the following : 4×3.5=14

- (a) Simple monopoly and discriminating monopoly
- (b) Social infrastructure and physical infrastructure
- (c) X-chart and R-chart
- (d) Sinking fund factor and capital recovery factor
- (e) Analytical decision and adaptive decision

3. (a) Describe any *two* critical elements of economic environment.

- (b) Discuss the important elements of integrated energy policy in India.

7+7

4. (a) How are different agencies working towards the preservation of global environment ? Explain in brief.

- (b) Explain the interlinkage between trade and environment.

7+7

5. (a) Discuss the methodology adopted for integrated rural energy planning in India. 7

- (b) There are *two* energy conservation measures as described below :

Measure 1 : The equipment costs ₹ 10,000 and pays back ₹ 12,000 in two years.

Measure 2 : The equipment costs ₹ 7,000 today and pays back ₹ 4,000 each year for two years.

If the rate of interest is 8%, determine the best alternative. 7

6. Determine the life cycle cost of : 7+7

- (a) Combination of PV and Biogas system. Assume suitable prices if required.

- (b) Explain the significance of implicit discount rate in the context of energy economics.

7. Write short notes on any *two* of the following :

7+7

- (a) Energy used in transportation sector
- (b) Simplex method
- (c) Herzberg's two-factor theory
- (d) Privatization of railways

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