No. of Printed Pages : 3 **MRWE–002**

MASTER OF SCIENCE
(RENEWABLE ENERGY AND ENVIRONMENT) (MSCRWEE)
Term-End Examination
December, 2025

MRWE-002 : ENERGY STORAGE

Time : 3 Hours *Maximum Marks : 70*

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

1. Describe the influence of policy and regulatory framework on the deployment and adoption of energy storage systems. 10
2. Compare the different types of bearings used in flywheel energy system. 10

3. Discuss the advantages and limitations of photochemical energy storage system. 10

4. Differentiate between any *two* of the following : 5+5

   (a) Primary and Secondary batteries

   (b) Latent heat and Sensible heat thermal energy storage system

   (c) Solid oxide fuel cell and Molten carbonate fuel cell

   (d) Compressed Air Energy Storage (CAES) and Pump Hydrogen

5. What is electrochemical energy storage ? Enlist the various applications of electro-chemical energy storage systems. 10

6. Discuss the various safety aspects of hydrogen energy storage system. 10

7. Explain the working principle of a cold thermal energy storage system. 10

8. (a) What is heat loss and why is it significant in various energy storage applications ? 5

   (b) How can weather forecasting be integrated with solar energy storage ? 5

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

   (a) Greenhouse heating systems

   (b) Grid stability and reliability

   (c) Earth storage

   (d) Phase transition diagram

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