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MRW-003

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

Term-End Examination

December, 2023

MRW-003 : RENEWABLE ENERGY SYSTEM

Time : 3 Hours

Maximum Marks : 70

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

(ii) All questions carry equal marks.

1. What is the status of non-conventional energy sources in India ? What is their future prospectus ? 10
2. Define energy harvesting. Discuss various types of energy harvesting. 10
3. What are biomass conversion technologies ? With the help of a diagram, explain various conversion technologies. 10

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4. Discuss in detail the process of coal preparation and refining. 10
5. Explain the term solar constant. What is its variation with time and discuss the reason for this variation. 10
6. Discuss the principles of solar photovoltaic energy conversion. 10
7. State and describe the essential components of wind turbine. 10
8. Explain with sketches, the various methods of tidal power generation. What are the limitations of each method ? 10
9. Describe the concept of converting wave energy into mechanical/electrical energy. 10
10. Write short notes on any *two* of the following : 5+5
 - (i) Environmental impacts of Biofuel production
 - (ii) Geothermal Energy in India
 - (iii) Green hydrogen
 - (iv) Micro/Mini small hydro system

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