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ENS-503

ENERGY RESOURCES

M.Sc. Environmental Science (MSCES)

1st Semester Examination, 2023 (Dec.)

Time : 2 Hours] **Max. Marks : 70**

Note : This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

SECTION–A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. Define Energy. Discuss in detail the renewable and non-renewable energy sources used in India for meeting energy requirements.

2. Describe briefly the aspects of coal, oil, and natural gas as energy sources. Explain the principal of coal, oil, and natural gas energy fulfil the energy requirements of Nation.

3. Explain the concept of Liquefied Natural Gas (LNG) and its role in global energy trade.

4. How do international organizations like the United Nations and the International Energy Agency (IEA) influence global energy policies?

5. What is geothermal energy? Explain the principal and application of geothermal energy in meeting the energy requirements.

SECTION–B
(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. Discuss the different energy types and its significance in human.

2. Explain energy crisis. What are the primary factors that can lead to an energy crisis?

3. Explain the advantages and disadvantages of using fuelwood for heating and cooking in rural areas.

4. What is hydropower, and how does it generate electricity?

5. What is the National Energy Mission in India?

6. Explain the concept of agroforestry and its role in sustainable biofuel farming.

7. What is the concept of a hydrogen economy, and how does it differ from current energy systems?

8. What is wind energy, and how does wind turbines generate electricity?