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**Presidency University**

**Bengaluru**

**SCHOOL OF ENGINEERING**

**Make-Up Examinations, July 2024**

**Winter Semester**: II

**Course Code**: PET1006

**Course Name**: Overview of Energy Industry

**Program & Sem**: B.Tech. (Petroleum)

**Date**: 03/July/2024

**Time**: 01:30 PM – 04:30 PM

**Max Marks**: 100

**Weightage**: 50%

**Instructions:**

1. *Read the all questions carefully and answer accordingly.*
2. *Do not write any matter on the question paper other than roll number.*

**Part A [Memory Recall Questions]**

**Answer any three Questions. Each question carries ten marks. (3Qx 10M= 30M)**

1. What are the primary sources of energy currently utilized worldwide, and how have these sources evolved over the past century? (C.O.No.1) [Knowledge]

2. How do renewable energy sources compare to fossil fuels in terms of energy output, cost, and environmental impact? (C.O.No.1) [Knowledge]

3. What are the key technological advancements that have significantly impacted the energy industry, particularly in the fields of solar, wind, and nuclear energy? (C.O.No.2) [Knowledge]

4. How do energy policies and regulations differ across major global economies, and what are the implications of these differences for international energy markets? (C.O.No.4) [Knowledge]

5. What role does energy storage play in the integration of renewable energy sources into the grid, and what are the most promising technologies in this area? (C.O.No.3) [Knowledge]

**Part B [Thought Provoking Questions]**

**Answer any two Questions. Each question carries fifteen marks. (2Qx15M=30M)**

6. What are the potential impacts of climate change on energy infrastructure and demand, and how is the industry adapting to these challenges? (C.O.No.4) [Comprehension]

10. How are emerging markets and developing countries addressing their growing energy needs, and what role do international organizations and investments play in supporting their energy infrastructure development? (C.O.No.4) [Comprehension]

11. How do carbon pricing mechanisms, such as carbon taxes and cap-and-trade systems, influence the energy market and emissions reduction strategies? (C.O.No.4) [Comprehension]

**Part C [Problem Solving Questions]**

**Answer any two Questions. Each question carries twenty marks. (2Qx20M=40M)**

12. How does energy consumption vary between different sectors (e.g., transportation, industry, residential), and what are the trends driving these changes? (C.O.No.2) [Application]

13. What are the environmental and social impacts of large-scale energy projects, such as hydroelectric dams and offshore wind farms, and how are these impacts managed?

(C.O.No.2) [Application]

14. How do energy companies balance the need for profitability with the increasing pressure to adopt sustainable and environmentally friendly practices? (C.O.No.4) [Application]