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**PRESIDENCY  
UNIVERSITY**  
BENGALURU

**School of Engineering**

**Mid - Term Examinations - November 2024**

**Semester:** 5<sup>th</sup>

**Date:** 04-11-2024

**Course Code:** CIV2001

**Time:** 02:00pm – 03:30pm

**Course Name:** Sustainability Concepts in Engineering

**Max Marks:** 50

**Program:** B. Tech

**Weightage:** 25%

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**Instructions:**

*(i) Read all questions carefully and answer accordingly.*

*(ii) Do not write anything on the question paper other than roll number.*

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**Part A**

**Answer ALL the Questions. Each question carries 2marks.**

**5Qx2M=10M**

- |   |   |                |           |            |
|---|---|----------------|-----------|------------|
| 1 | Define sustainability in ensuring the long-term health of ecosystems and human life.  | <b>2 Marks</b> | <b>L1</b> | <b>CO1</b> |
| 2 | Sustainable energy is the energy that, in its production or consumption, has minimal negative impacts on human health. What is MEA? | <b>2 Marks</b> | <b>L1</b> | <b>CO1</b> |
| 3 | Define Kyoto protocol in combating climate change.  | <b>2 Marks</b> | <b>L1</b> | <b>CO1</b> |
| 4 | List the causes that contribute to environmental degradation  | <b>2 Marks</b> | <b>L1</b> | <b>CO2</b> |
| 5 | Define carbon sequestration in mitigating climate change.   | <b>2 Marks</b> | <b>L1</b> | <b>CO2</b> |

**Part B**

**Answer ALL Questions. Each question carries 10 marks.**

**4QX10M=40M**

- |   |   |                 |           |            |
|---|---|-----------------|-----------|------------|
| 6 | Explain the most critical needs and priorities to ensure sustainability in various sectors like energy, water, agriculture, and industry. | <b>10 Marks</b> | <b>L2</b> | <b>CO1</b> |
|---|---|-----------------|-----------|------------|

**or**

- 7 Elaborate on the Economic-Social-Environmental Matrix for essential resources like food, water, and energy. **10 Marks** **L2** **CO1**
- 8 List any 6 Sustainable Development Goals (SDGs) and explain any four in detail, focusing on their targets. **10 Marks** **L2** **CO1**
- or**
- 9 Explain the objectives and salient features of the Air Act and how it regulates air quality. **10 Marks** **L2** **CO1**
- 10 Explain the difference between resource degradation and environmental degradation. Provide examples of each. **10 Marks** **L2** **CO2**
- or**
- 11 List and explain any two effects of Environmental Degradation. **10 Marks** **L2** **CO2**
- 12 Compare mitigation and adaptation strategies in responding to climate change. Provide examples of each. **10 Marks** **L2** **CO2**
- or**
- 13 What is a carbon footprint? Discuss the main contributors to an individual's carbon footprint and explain ways individuals can reduce their carbon footprint through lifestyle changes. **10 Marks** **L2** **CO2**