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 **PRESIDENCY UNIVERSITY**

  **Bengaluru**

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| **Ph.D. Course Work End Term Examinations – JAN-FEB 2025** |
| **Date:** 31- 01- 2025 **Time:** 09:30 am – 12:30 pm |

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| **School:** SOE | **Program:** Ph.D. |
| **Course Code :** MEC822 | **Course Name :** Maintenance Engineering |
| **Semester**:  | **Max Marks**: 100 | **Weightage**: 50% |

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| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** |
| **Marks** | **20** | **20** | **30** | **30** | **-** |

**Instructions:**

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

**Part A**

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| **Answer ALL the Questions. Each question carries 10 marks. 6Q x 10M=60Marks** |
| **1** | Define Maintenance & List the various types of Maintenance | **10 Marks** | **L1** | **CO1** |
| **2** | Discuss the Engineering Maintenance in the 21st Century | **10 Marks** | **L1** | **CO1** |
| **3** | List the various Differences between TQM and TPM | **10 Marks** | **L2** | **CO2** |
| **4** | Write a note on 5S Pillar of TPM | **10 Marks** | **L2** | **CO2** |
| **5** | Discuss the Scheduled Downtime & Un-Scheduled Downtime with examples | **10 Marks** | **L2** | **CO3** |
| **6** | How the dependence of Availability on Reliability & Maintainability can be demonstrated by means of geometrical model. | **10 Marks** | **L2** | **CO4** |

**Part B**

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| **Answer the Questions. Each question carries 20 marks 2Q x 20 = 40 Marks** |
| **7.** | How do you relate time-dependent failure rate of items which follows the shape of a bathtub? | **20 Marks** | **L3** | **CO3** |
|  |
| **8.** | What are the types of availability depending on the time elements we take into consideration discuss in detail | **20 Marks** | **L3** | **CO4** |

**\*\*\*\*\* BEST WISHES \*\*\*\*\***