|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Roll No. |  |  |  |  |  |  |  |  |  |  |  |  |



**PRESIDENCY UNIVERSITY**

**Bengaluru**

|  |
| --- |
| **Ph. D Course Work End Term Examinations – JAN-FEB 2025** |
| **Date:** 04 – 02- 2025 **Time:** 09:30 am – 12:30 pm |

|  |  |  |
| --- | --- | --- |
| **School:** SOE | **Program:** Ph. D | |
| **Course Code :** MEC810 | **Course Name :** Advanced Materials Processing – I | |
| **Semester**: | **Max Marks**: 100 | **Weightage**: 50% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Answer ALL the Questions. Each question carries 10 marks. 6Q x 10M=60Marks** | | | | |
| **1** | Discuss the Fatigue & Creep behavior of metals | **10 Marks** | **L1** | **CO1** |
| **2** | Discuss the various Defects in Metallic structure. | **10 Marks** | **L1** | **CO1** |
| **3** | Discuss the Iron carbon equilibrium diagram of Stainless Steel. | **10 Marks** | **L2** | **CO2** |
| **4** | Discuss the various Heat treatment processes | **10 Marks** | **L2** | **CO2** |
| **5** | Write a note on various Alloys of Aluminum | **10 Marks** | **L2** | **CO3** |
| **6** | Discuss the Engineering of Thermoplastics & Thermosets | **10 Marks** | **L2** | **CO4** |

**Part B**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Answer the Questions. Each question carries 20 marks 2Q x 20 = 40 Marks** | | | | |
| **7.** | Discuss the Structure, Properties & Applications of Copper alloys | **20 Marks** | **L3** | **CO3** |
|  | | | | |
| **8.** | Discuss the Structure and Properties of Thermoplastics & Thermosets | **20 Marks** | **L3** | **CO4** |

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