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**PRESIDENCY  
UNIVERSITY**

**BENGALURU**

**Department of Research & Development  
Mid - Term Examinations - SEPTEMBER 2024**

<b>Odd Semester:</b> Ph.D. Course Work	<b>Date:</b> 28 /09/2024
<b>Course Code:</b> MEC810	<b>Time:</b> 2:00pm – 3:30pm
<b>Course Name:</b> Advanced Materials Processing-I	<b>Max Marks:</b> 50
<b>Department:</b> Mechanical Engineering	<b>Weightage:</b> 25%

**Instructions:**

- (i) Read all questions carefully and answer accordingly.  
(ii) Do not write anything on the question paper other than roll number.

**Part A**

<b>Answer ALL the Questions. Each question carries 5 marks.</b>		<b>4Qx5M=20M</b>
<b>1</b>	What are Metals? How do you classify Metals	<b>5 Marks</b>
<b>2</b>	What is Composite Material? How do you classify the Composite Materials?	<b>5 Marks</b>
<b>3</b>	What are the various Effects on alloying elements	<b>5 Marks</b>
<b>4</b>	Write a note on transformation hardening in steels	<b>5 Marks</b>

**Part B**

<b>Answer ALL Questions. Each question carries 15 marks.</b>		<b>2Qx15M=30M</b>
<b>5</b>	Discuss the Iron carbon equilibrium diagram of Stainless Steel.	<b>15 Marks</b>
<b>6</b>	Discuss the various Heat treatment processes	<b>15 Marks</b>