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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> 27 /09/2024
<b>Course Code:</b> MAT841	<b>Time:</b> 2:00pm – 3:30pm
<b>Course Name:</b> Machine learning with Graphs.	<b>Max Marks:</b> 50
<b>Department:</b> Mathematics	<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>	Explain the types of machine learning.	<b>5 Marks</b>
<b>2</b>	Detail about applications of machine learning that use ROC graphics.	<b>5 Marks</b>
<b>3</b>	Differentiate between correlation and regression.	<b>5 Marks</b>
<b>4</b>	Briefly explain graph kernels.	<b>5 Marks</b>

**Part B**

<b>Answer ALL Questions. Each question carries 15 marks.</b>		<b>2Qx15M=30M</b>
<b>5</b>	a) Describe the role of reasoning in machine learning. b) Explain about Natural learning process.	<b>15 Marks</b>
<b>6</b>	a) Describe Graph representation learning. b) Write a detailed note on traditional machine learning on graph.	<b>15 Marks</b>