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**PRESIDENCY UNIVERSITY
BENGALURU**

Department of Research & Development

Mid - Term Examinations - SEPTEMBER 2024

Odd Semester: Ph.D. Course Work

Course Code: ECE842

Course Name: Advanced Digital Image Processing

Department: ECE

Date: 28/09/2024

Time: 2:00pm-3:30pm

Max Marks: 50

Weightage: 25%

Instructions:

- (i) Read the all questions carefully and answer accordingly.
 - (ii) Do not write any matter on the question paper other than roll number.
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PART A (THOUGHT PROVOKING)

Answer ANY 4 Questions. Each question carries 5 marks.

(4Qx 5M= 20M)

1. Differentiate between colour and gray scale transformation
2. What is Image Enhancement? Explain Spatial Domain Method of Image Enhancement
3. Logarithms are used for image transformation. Bring out the area in satellite image processing, where log transformation is suitable.
4. What is Spatial Filtering? Explain the advantages of spatial filtering against homomorphic filtering wrt satellite image.
5. Explain in brief the steps of Spatial Feature Manipulation

PART B (PROBLEM SOLVING)

Answer all the Questions. Each question carries 10 marks.

(3Qx 10M= 30M)

6. Image restoration is an important technique in DIP wherein the damaged image is brought back to clarity. Explain how the Image restoration is done for satellite image.
7. Along with the necessity of filtering, explain Homomorphic Filtering with respect to satellite image.
8. Histogram is a graphical representation of data which gives maximum information. With respect to image processing, explain the relevance of histogram with an example.