CODE: _____ TIME: 1HR 30MINS MAX MARKS: _____

Instructions:
1. All questions are compulsory
2. Make suitable assumptions wherever necessary and state the assumptions made.
3. Answers to the same question must be written together.
4. Numbers to the right indicate marks
5. Draw neat labeled diagrams wherever necessary
6. Use of non-programmable calculator is allowed.

Q1.	**Attempt any 2 questions**	**08**
a.	List and explain any 2 fields that use Image Processing	04
b.	What are the Fundamental Steps of Digital Image Processing?	04
c.	Brightness is not a simple function of intensity. Explain.	04
d.	What do you understand by the terms Adjacency and Boundaries? (Write your answer with respect to pixels.)	04

Q2.	**Attempt any 2 questions**	**08**
a.	What is the outcome of applying Image Negatives?	04
b.	How would you describe the process of Histogram Equalization?	04
c.	What are Order Statistic Filters?	04
d.	Write a note on Periodic Noise	04

Q3.	**Attempt any 2 questions**	**08**
a.	Illustrate the HSI Color Model	04
b.	How is Coding redundancy related to Image compression?	04
c.	Explain any one image compression technique	04
d.	Write a note on Wavelet Transforms?	04

Q4.	**Attempt any 2 questions**	**08**
a.	Explain Edge based Segmentation	04
b.	How is Thinning and Thickening done using Erosion Dilation?	04
c.	Write a note on Region based segmentation	04
d.	What is Skeletonization?	04

Q5.	**Attempt any 2 questions**	**08**
a.	List and explain any 2 applications of Watershed Algorithm	04
b.	What is Basic Global Thresholding?	04
c.	Write a note on Dam Construction for Segmentation	04
d.	Describe Otsu's Method	04