



Seat No. : _____

DB-110

December-2025

5th year M.Sc. (CA & IT), Sem.-IX

Image Processing

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Answer the following : (Any One)
 - (1) Describe the fundamental steps of image processing with diagram. 7
 - (2) Write a brief note on the objective of digital image processing. 7
1. (B) Draw block diagram of human eye and explain importance of rods and cons in the human eye. 7

2. (A) Answer the following : (Any One)
 - (1) State application of different parts of EM spectrum (diagram must) 7
 - (2) Define histogram. Also explain histogram equalization and its application. 7

Equalize the given histogram								
Grey	0	1	2	3	4	5	6	7
No. of Pixels	0	0	0	6	14	6	0	0
2. (B) State importance of Fourier Transform in image processing. Explain with graph the Image negative, Log and Power Law transformation . 7

3. (A) Answer the following : (Any One)
 - (1) Describe the properties of the Frequency domain. Explain the smoothing low pass filters used in frequency domain image enhancement. 7
 - (2) What are the image restoration filters ? State inverse filtering with example. 7
3. (B) Explain the different file formats used in image processing 7

4. (A) Answer the following : (Any One)
 - (1) What do you mean by image restoration ? Is original image can be restored ? Justify your Answer with example. 7
 - (2) Describe high boost filtering and unsharpening. 7
Use a image of size 4*4 with L4 mask.

4. (B) Describe different restoration filters used in image processing. Discuss Weiner filter details. 7
5. (A) Answer the following : (Any **One**)
- (1) Describe different colour transformation in image processing. 7
 - (2) Enlist and explain the various point processing techniques used in digital image processing. 7
5. (B) With an example explain the 1st and 2nd order derivatives in edge detection. 7
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