Roll No.	Total No. of Pages : 02
Total No. of Questions : 07	
B.Sc. (AI and ML) (Sem.–4))
IMAGE PROCESSING	
Subject Code : UGCA-1974	ŀ
M.Code : 91708	
Date of Examination : 17-12-22	2
Time : 3 Hrs.	Max. Marks:60
INSTRUCTIONS TO CANDIDATES :	

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

- 1. Write briefly :
 - a) What is Computer Graphics?
 - b) Define Aspect Ratio.
 - c) Define Brightness.
 - d) What is Hue and Saturation?
 - e) Define Histogram.
 - f) What are the three types of discontinuity in digital image?
 - g) Differentiate between special domain and frequency domain filters.
 - h) What are the types of noise models?
 - i) Define region growing.
 - j) Give the properties of the second derivative around an edge.

1 M-91708

SECTION-B

- 2. a) Discuss the essential applications of Computer Graphics?
 - b) What is the difference between "*shaded*" and "*rendered*" surfaces?
- 3. Discuss about various components of Image Processing by drawing suitable diagram.
- 4. Difference between RGB, CMYK, HSV and YIQ Color Models.
- 5. a) Explain sampling and quantization by taking suitable examples.
 - b) Why smoothing & sharpening is required in processing of image?
- 6. Define Image Segmentation. What are the various techniques of Image segmentation? Explain.
- 7. Give the significance of image restoration. Explain the model of image degradation and restoration process using suitable block diagram.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.