SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN (AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.
M.Sc. - END SEMESTER EXAMINATIONS APRIL - 2022
SEMESTER - II
20PCSCT2005 - Digital Image Processing

Total Duration : 3 Hrs.   **Total Marks : 60**

Section A

Answer any **SIX** questions $(6 \times 5 = 30$ Marks)

1. Define color image. Explain the need of color image processing.

2. Apply image restoration in the presence of noise reduction using spatial filtering.

3. Explain in detail about image compression models.

4. Explain about Prewitt and Sobel edge detectors.

5. What is image enhancement? List and explain the advantages of image enhancement.

6. Apply order statistics filters on the selected pixels in the image.

7. Show the characteristics of loss less and lossy compression.

8. What is thresholding? Explain about global thresholding.

Section B

Part A

Answer any **TWO** questions $(2 \times 10 = 20$ Marks)

9. Describe different color models in image processing.

10. Apply the Fourier transform on image function in frequency domain filters.

11. Diagnose the different ways to estimate the degradation function in image restoration.

12. Construct Huffman code for the word "BABY". Also evaluate the efficiency of the Huffman code.

Part B

Compulsory question $(1 \times 10 = 10$ Marks)

13. Apply various Region based segmentation techniques on image and discuss its pros and cons.

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