

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. Computer Science- END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - II

23PCSCT2005 - Digital Image Processing

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

Section B

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

1. What is the need of DCT ? Explain all the properties of DCT.
2. Describe the basic steps in image processing.
3. Relate thresholding to image segmentation.
4. Rephrase the statement "Image compression reduces the size of an image".
5. Define image enhancement and its importance in image processing.
6. Solve a simple problem involving image compression using Huffman coding.
7. Classify the different types of edge detection operators.
8. Compute the histogram of a simple image.

Section C

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

9. Explain the concept of color models in digital images.
10. Classify the different types of image degradation, such as noise, blur, and distortion, and provide examples of each.
11. Discriminate between different types of image compression algorithms.
12. Examine the concept of image segmentation and its importance in computer vision

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

13. Classify the different types of image filtering techniques, including spatial and frequency domain filtering.
