School of Computing Science and Engineering
Master of Technology in Computer Science and Engineering
Mid Term Examination - May 2024

Duration : 90 Minutes
Max Marks : 50

Sem II - R1PV206B - Computer Vision

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1) Discuss the significance of histogram analysis in image enhancement. — K2 (2)

2) How does coordinate conventions affect image processing algorithms? — K1 (3)

3) Write MATLAB/OCTAVE code to perform edge detection on an input image. — K2 (4)

4) Critically evaluate the strengths and weaknesses of histogram analysis in different image processing tasks. — K2 (6)

5) Propose a new MATLAB/OCTAVE function for a specific image processing operation, explaining its design and implementation — K3 (6)

6) Define vectorization in the context of Python and its significance in numerical computing. — K3 (9)

7) How does vectorization optimize numerical operations in Python? — K4 (8)

8) Develop a Python script to extract specific frames from a video file using OpenCV — K4 (12)

OR

Compare and contrast lists, tuples, and dictionaries in terms of their characteristics and use cases. — K4 (12)