

School of Computing Science and Engineering**Master of Technology in Computer Science and Engineering
Semester End Examination - Jun 2024****Duration : 180 Minutes
Max Marks : 100****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) What is sampling and quantization in the context of digital images? K1(2)
- 2) Compare the performance of different edge detection algorithms in terms of their ability to detect edges accurately. K2(4)
- 3) Evaluate the reliability of different object detection algorithms in detecting objects of varying sizes and orientations. K2(6)
- 4) Describe the key components of a YOLO architecture. K3(9)
- 5) Explain the concept of Generative Adversarial Networks (GANs). K3(9)
- 6) Evaluate the strengths and weaknesses of YOLO in terms of speed and accuracy. K5(10)
- 7) Create a GAN model to generate images of a specific type, such as human faces or handwritten digits. K4(12)
- 8) Define image enhancement in the frequency domain and explain its advantages over spatial domain methods. K5(15)
- 9) Propose a new Python library that aims to streamline the process of working with both images and numerical data, outlining its key features and functionalities. K5(15)
- 10) Discuss the process of image segmentation and its importance in computer vision. K6(18)