



R20 Regulation

Subject code: 3P4GB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech IV Semester Regular Examinations, July 2022

INTRODUCTION TO COMPUTER VISION

(ARTIFICIAL INTELLIGENCE & MACHINE LEARNING)

Maximum Marks: 70

Date:22.07.2022 Duration: 3 hours

- Note:
- 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Write a short note on various color standards.
- 2 Define pinhole camera and how to overcome these limitations.
- 3 Write short notes on histogram equalization.
- 4 Give the 2D geometric transformation function for translation and rotation.
- 5 Why Canny edge detection is better when compared to other methods?
- 6 Define Hough Transforms.
- 7 Express the use of Strategic Learning.
- 8 Point out the Approaches to the Decision-making Process.
- 9 How an image is compressed using the fractal compression method?
- 10 Explain various image standards.

Part-B

Answer All the following questions.

(10MX 5=50Marks)

- 11 Explain the process of capturing images from various input sources. (10)
OR
- 12 How to present the captured images in printing without the loss of quality? (10)
- 13 Explain the following in detail.
(i) Grey-level Transformations (5)
(ii) Thresholding Errors (5)
OR
- 14 Explain the process of Morphing, Warping, and Fading in detail. (10)
- 15 Digitize a line from (10,12) to (15,15) on a raster screen using Bresenham's straight line Algorithm. (10)
OR
- 16 Explain the Morphological and other Area Operations in detail. (10)
- 17 Explain in detail about Labelling Lines and Regions. (10)
OR
- 18 Explain in detail about decision functions and Optical Character Recognition. (10)
- 19 Explain Application Sketches in detail. (10)
OR
- 20 Compare and contrast the various image compression methods. (10)