

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

THIRD SEMESTER M.C.A DEGREE EXAMINATION (Regular), FEBRUARY 2022**(2020 SCHEME)****Course Code: 20MCAT233****Course Name: Digital Image Processing****Max. Marks: 60****Duration: 3 Hours****PART A***(Answer all questions. Each question carries 3 marks)*

1. Explain the differences between image processing and computer vision.
2. What are the types of images?
3. Define image enhancement.
4. Differentiate unsharp masking and high-boost filtering.
5. What is meant by unitary transformation of an image?
6. Explain the properties of 2D- DFT.
7. Write a short note on Wiener filtering.
8. Write notes on the types of data redundancies.
9. Compare and contrast erosion and dilation.
10. Write a short note on Hough transform.

PART B*(Answer one full question from each module, each question carries 6 marks)***MODULE I**

11. Elaborate on the components of an image processing system. (6)

OR

12. Illustrate image sampling and quantization. (6)

MODULE II

13. Illustrate histogram equalization with an example. (6)

OR

14. Describe the intensity transformation functions. (6)

MODULE III

15. Explain Discrete Cosine Transform and its properties. (6)

OR

16. List and explain the steps of frequency domain filtering. (6)

MODULE IV

17. What are the different image noise models? Explain. (6)

OR

18. Discuss Huffman coding. (6)

MODULE V

19. Compare Hildreth edge detector and Canny edge detector. (6)

OR

20. Elaborate on region-based segmentation. (6)
