AMRIT SCIENCE CAMPUS

DEPARTMENT OF STATISTICS AND COMPUTER SCIENCE

B.Sc. CSIT VI SEMESTER PRE-BOARD ASSESSMENT, 2069

SUBJECT:- Image Processing (CSC-363) FULL MARKS: 60

TIME: 3 hours PASS MARKS: 24

Attempt any TEN questions. All questions carry equal marks (6 each).

1. Define Digital Image. Explain how can you represent image in a digital computer.
2. Explain different types of image operations used in digital image processing with suitable examples.
3. What is a discrete fourier transform. Explain how filtering is performed in frequency domain.
4. What is image compression? Differentiate between lossless and lossy predictive coding
5. What do you mean by segmentation by thresholding? How can we choose thresholds?
6. Define edge detection. Explain how edge can be detected using gradient filter.
7. Why is histogram used in image processing. Explain in detail about contrast stretching.
8. What do you mean by classifiers? Explain any one classifier.
9. Define perception. Explain how neural network can be used for pattern recognition?
10. Differentiate between: [any TWO]
    a. Dilation and Erosion
    b. Local and Global operations
    c. Mean and Median filter
11. Write short notes on: [any TWO]
    a. Contour Representation
    b. Hopfield Networks
    c. Contrast Stretching