PATAN MULTIPLE CAMPUS
DEPARTMENT OF STATISTICS AND COMPUTER SCIENCE
VI SEMESTER HOME ASSIGNMENT

LEVEL:- B. Sc. (CSIT) III/II
SUBJECT:- Image Processing FULL MARKS:- 60
TIME:- 03:00 hrs. PASS MARKS:- 24

Candidates are requested to give their answers in their own words as far as practicable.
Figures in the margin indicate full marks.

Attempt any TEN questions.

1. Define Image. What are the fundamental steps of Image Processing? [1+5]
2. Explain image operations and neighborhood in Image Processing. [3+3]
3. Describe the significance of Histogram. How can Histogram Specification be done? [2+4]
4. How is filtering performed in frequency domain? Write the response of different types of LPF. [3+3]
5. What is image compression? Explain the coding mechanism of different types of Interframe coding. [2+4]
6. What is Pattern Recognition? Explain how an object can be recognized with the aid of pattern recognition system. [1+5]
7. Explain the different methods/operators of edge detection. [6]
8. What is the difference between edge and boundary? How can the threshold value chosen? [2+4]
9. What is Hadamard Transform? Explain its energy compaction property with a suitable example. [2+4]
10. Write short notes on: [4x2]
    a. Elements of visual perception
    b. Bayes Classifier
11. Differentiate between [3x2]
    a. Opening and closing operation
    b. Local and Global Operations

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