

Seat No. **MAR_APR 2025 SUMMER EXAMINATION****1156 Master of Technology****Sub. Name: Computer Vision****Sub. Code: 72683****Day and Date: JUNE ,02-06-2025****Total Marks: 70****Time: 10:30 AM To 01:30 PM**

- Instructions:**
1. All questions are compulsory
 2. Assume suitable data wherever necessary and mention it boldly
 3. Draw neat labelled diagrams wherever necessary
 4. Figures to the right indicate full marks

Q1) Answer any two of the following [12]

- a. Explain Discrete Wavelet Transform in one Dimension. [6]
- b. Explain the two band subband coding and decoding system. [6]
- c. Explain Haar Transform. [6]

Q2) Answer any two of the following. [12]

- a. Describe boundary representations using signatures. [6]
- b. What are simple regional descriptors? Explain topological regional descriptors. [6]
- c. Explain structural and spectral approaches for texture descriptors. [6]

Q3) Answer the following [11]

- a. Describe different strategies of pattern recognition. [5]

Or

Draw and explain the block diagram of the pattern recognition system.

- b. With the help of a suitable example explain how 4-directional and 8- Directional Chain Codes are used for boundary representation. [6]

Q4) Answer any two of the following [12]

- a. What color features are used in image retrieval and mining? Explain any Two. [6]
- b. Explain image mining and CBIR. Also, explain categories of image retrieval. [6]
- c. Explain video mining. [6]

Q5) Answer any two of the following [12]

[1]

P.T.O.

- a. Explain statistical decision-making using Baye's classifier. [6]
- b. Describe classical schemes for clustering. [6]
- c. Explain the Expectation Maximization (EM) algorithm. [6]

Q6) Answer the following [11]

- a. What is a neural network? Explain different activation functions. [5]
Or
Explain the minimum squared error (MSE) criterion used in Perceptron learning for multiple outputs.
- b. Explain single and multilayer feed-forward artificial neural network. [6]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (1156) Master of Technology (CBCS) (72683) Computer Vision Part 1 SEM 2