Roll No: | | | | | | | | | | | |

PRESIDENCY UNIVERSITY

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

Presidency University Act, 2013 of the Karnataka Act No. 41 of 2013 | Established under Section 2(f) of UGC Act, 1956
Approved by AICTE, New Delhi | Approved By BCI
Bengaluru

Mid Term Examinations - October 2026

Date: 06/10/2026 **Time:** 02:00 PM - 03:30 PM

Course Code: CBD3412 **Course Name:** Computer Vision for AI Applications

Semester: Seventh Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2
Marks	44	46

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	Differentiate between Gaussian filtering and median filtering based on their operation and applications.	2	CO1	BT2
2	Explain how histogram equalization improves the contrast of an image.	2	CO1	BT2
3	Distinguish between global thresholding and adaptive thresholding based on how the threshold value is selected.	2	CO2	BT2
4	Explain the difference between 4-connectivity and 8-connectivity in region-based segmentation.	2	CO2	BT2
5	Distinguish between motion analysis and object tracking in terms of their purpose and output.	2	CO2	BT2

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Explain corner detection and describe the working principle of the Harris corner detector. Differentiate edges and corners.	10	CO1	BT2
7	Explain the complete computer vision pipeline and discuss the major challenges encountered in visual data analysis.	10	CO1	BT2

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Explain the major components and stages involved in image acquisition. Discuss the factors affecting the quality of acquired images.	10	CO1	BT2
9	Explain the major image enhancement techniques used to improve the visual quality of digital images.	10	CO1	BT2

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	Explain contour analysis and shape representation. Discuss important shape descriptors used in computer vision.	10	CO2	BT2
11	Explain feature extraction in computer vision. Discuss different categories of visual features and distinguish global and local features.	10	CO2	BT2

PART E: Answer Any 1 Following Questions. 10 M

PTO (Please Turn Over)

Q.N.	Questions	M	CO	BT
12	Explain keypoint detection and feature description. Discuss the characteristics of good keypoints and common keypoint detection methods.	10	CO2	BT2
13	Explain motion analysis in video. Discuss frame differencing, background subtraction, and optical flow.	10	CO2	BT2