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GIET UNIVERSITY, GUNUPUR – 765022
Ph.D. (Second Semester) Examinations, April – 2024
PPEEC2023 – Computer Vision
(ECE)

Time: 3 hrs

Maximum: 70 Marks

The figures in the right-hand margin indicate marks.

Answer ANY FIVE Questions**(14 x 5 = 70 Marks)**

	Marks
1. Explore binary shape analysis and boundary pattern analysis techniques. How are these methods used in image segmentation, and what are their limitations?	14
2.a. What are the different edge detection approaches in image Processing? Discuss about point detection, line detection approach.	7
b. Explain texture analysis in feature extraction from an image. How it contribute towards image understanding?	7
3. Explore object recognition methods, including Hough transforms and principal component analysis. How are these methods used to recognize objects in images, and what are their limitations?	14
4. Discuss about various corner detection algorithms and their applications. How do corner detection methods contribute towards feature extraction?	14
5. What do you mean by monocular imaging systems and discuss their characteristics? How do monocular imaging systems differ from binocular imaging systems?	14
6. Discuss about different motion estimation methods, including optical flow and KLT. How are these methods used in motion analysis and tracking?	14
7. Discuss about background subtraction and modelling techniques. How are these techniques applied in motion detection and object tracking?	14
8. Explain the concepts of binocular stereopsis and epipolar geometry. How are these concepts utilized in 3D reconstruction from stereo images?	14

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