

CBCS SCHEME

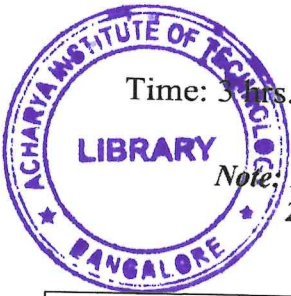
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BAI515A

Fifth Semester B.E./B.Tech. Degree Examination, June/July 2026

Computer Vision



Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1				M	L	C
Q.1	a.	What is Computer Vision? And discuss the real world examples of computer vision.		6	L2	CO1
	b.	Compare Diffuse and Specular reflections.		8	L2	CO1
	c.	Explain the histogram equalization.		6	L2	CO1
OR						
Q.2	a.	Explain image sensing pipeline with block diagram.		6	L2	CO1
	b.	Explain Phong shading model with diagram.		8	L2	CO1
	c.	Explain the linear filtering with example.		6	L2	CO1
Module – 2						
Q.3	a.	What is guided image filtering? Explain.		6	L2	CO2
	b.	Compare FFT and DCT.		6	L2	CO2
	c.	What are morphological operations explain any two?		8	L2	CO2
OR						
Q.4	a.	Explain interpolation and decimation of an image.		6	L2	CO2
	b.	Explain two dimensional wavelet decomposition.		6	L2	CO2
	c.	Compare forward and inverse warping algorithm.		8	L2	CO2
Module – 3						
Q.5	a.	Explain the image degradation and restoration process.		10	L2	CO3
	b.	What is thresholding? Explain basic global thresholding with example.		10	L2	CO3

OR

Q.6	a.	Explain Gaussian and Gamma noise model.	10	L2	CO3
	b.	Compare segmentation by region growing and region splitting and merging.	10	L2	CO3

Module – 4

Q.7	a.	Explain primary and secondary colors of light and pigments.	6	L2	CO4
	b.	Explain CMY and CMYK color models.	8	L2	CO4
	c.	Explain intensity slicing and color coding.	6	L2	CO4

OR

Q.8	a.	Explain pseudocolor image processing with neat block diagram.	6	L2	CO4
	b.	Explain how color is used in image segmentation.	8	L2	CO4
	c.	How you convert colors from HSI to RGB?	6	L2	CO4

Module – 5

Q.9	a.	Explain erosion and dilation with example.	8	L2	CO5
	b.	How chain codes are used to represent boundary?	6	L2	CO5
	c.	Explain importance of structural patterns.	6	L2	CO5

OR

Q.10	a.	Illustrate minimum distance classifier for two classes in 2D.	8	L2	CO5
	b.	Explain thinning and thickening in morphological image processing.	6	L2	CO5
	c.	Explain signatures and how these are generated.	6	L2	CO5
