Reg. No.: | | | | | | | | |

G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.

PG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2025.

(For those admitted in June 2023 and later)

PROGRAMME AND BRANCH: M.Sc., COMPUTER SCIENCE

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
III	PART - III	CORE - 7	P23CS307	DIGITAL IMAGE PROCESSING

Date & Session : 03.11.2025/AN **Time : 3 hours** **Maximum: 75 Marks**

Course Outcome	Bloom's K-level	Q. No.	SECTION – A (10 X 1 = 10 Marks) Answer ALL Questions.
CO1	K1	1.	DIP means. a) Digital Image Processing b) Digital Input Process c) Data Image parameter d) None of these
CO1	K2	2.	Digitizing the _____ values is called quantization. a) altitude b) adaptive c) alternative d) amplitude
CO2	K1	3.	Image enhancement approaches fall into ___broad categories. a) one b) two c) three d) four
CO2	K2	4.	GHPF is an expansion of. a) General high-pass filter b) Gamma high-pass filter c) Gaussian high-pass filter d) None of these
CO3	K1	5.	Degradation process operates on a _____function that operates on an input image with an additive noise term. a) degradation b) disc c) digital d) All of these
CO3	K2	6.	The inverse filtering approach has poor performance. a) Best b) poor c) Worst d) good
CO4	K1	7.	_____is the art and science of reducing amount of data required to represent an image. a) Image combination b) Image segmentation c) Image enhancement d) Image compression
CO4	K2	8.	Huffman code construction is done in ____ steps. a) two b) three c) four d) five
CO5	K1	9.	_____ is the division of an image into regions or categories, which correspond to different objects or parts of objects. a) Image enhancement b) Image segmentation c) Image restoration d) None of these
CO5	K2	10.	_____ in that pixels in the same category also form a single connected component. a) clustering b) filtering c) spatial d) adjacency

Course Outcome	Bloom's K-level	Q. No.	**SECTION – B (5 X 5 = 25 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K2	11a.	Describe the Components of Image Processing System. **(OR)**
CO1	K2	11b.	Describe the Relationship between pixels.
CO2	K2	12a.	Summarize the steps for Enhancement using arithmetical / Logical operations. **(OR)**
CO2	K2	12b.	Discuss the procedure of Combining spatial enhancement methods.
CO3	K3	13a.	Demonstrate a model for Image Degradation/Restoration Process. **(OR)**
CO3	K3	13b.	Develop the Estimation of Degradation function.
CO4	K3	14a.	Analyse the Elements of information theory. **(OR)**
CO4	K3	14b.	Experiment with Error free compression.
CO5	K4	15a.	Analyse Image segmentation and its approaches. **(OR)**
CO5	K4	15b.	Comment on Edge detection and its derivatives.

Course Outcome	Bloom's K-level	Q. No	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K4	16a.	Examine the Fundamental steps in Digital Image Processing. **(OR)**
CO1	K4	16b.	Discover the Elements of visual perception.
CO2	K5	17a.	Justify the Image enhancement in spatial Domain. **(OR)**
CO2	K5	17b.	Evaluate the Basics of spatial filtering and its types.
CO3	K5	18a.	Asses Noise models in Image Restoration. **(OR)**
CO3	K5	18b.	Distinguish various filtering techniques.
CO4	K5	19a.	Explain the Importance of Image Compression models. **(OR)**
CO4	K5	19b.	Demonstrate the techniques of Lossy compression.
CO5	K6	20a.	Illustrate the procedure to test efficacy of Edge based and region-based segmentation? **(OR)**
CO5	K6	20b.	Discuss the features of Segmentation by morphological watersheds.