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

Question Paper Code: U2301

M.E. DEGREE EXAMINATION, NOV 2024

Second Semester

Computer Science and Engineering

21PCS201 - IMAGE PROCESSING AND ANALYSIS

(Regulations 2021)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	Mention the applications of image processing	CO1- U
2.	Give the formula for calculating D4 and D8 distance.	CO1- U
3.	What is Spatial Domain in Image Processing?	CO1- U
4.	What is Frequency Domain in Image Processing?	CO1- U
5.	Differentiate Regional Descriptors and Boundary Descriptors.	CO1- U
6.	What is the use of motion in segmentation	CO1- U
7.	What is variable length Coding?	CO1- U
8.	What is Digital Image Water Marking?	CO1- U
9.	Mention the Simple Boundary descriptors.	CO1- U
10.	Define Pattern and Pattern Classes.	CO1- U

PART B - (5 x 16 = 80 Marks)

11.	(a)	Explain the Color Models in Image Processing and Analysis in details.	CO1-U	(16)
		Or		
	(b)	Explain in detail the basic steps involved in digital image processing Systems	CO1-U	(16)

12. (a) Equalize the given Histogram CO2- App (16)

Gray Levels	0	1	2	3	4	5	6	7
No of Pixels	790	1023	850	656	329	245	122	81

Or

(b) Explain the Spatial and Grey level transformations in detail. CO1- U (16)

13. (a) Explain in detail about detection of discontinuities and edge linking with suitable example. CO1- U (16)

Or

(b) Explain in detail about Boundary and Regional Descriptors with Examples CO1- U (16)

14. (a) Describe in detail Image Compression Standards with an example CO1- U (16)

Or

(b) Compute the following LZW encoding sequence as ababbabcababba. CO2- App (16)

15. (a) Explain in detail Polygonal Approximation approaches with an example. CO1- U (16)

Or

(b) Describe briefly about Fourier Descriptor and Regional Descriptor CO1- U (16)