



MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC act, 1956

II B.Tech II Sem Regular End Examination, July 2022

Computer Vision

(CSM)

Time: 3 Hours.

Max. Marks: 70

Note: 1. Question paper consists: Part-A and Part-B.

2. In Part – A, answer all questions which carries 20 marks.

3. In Part – B, answer any one question from each unit.

Each question carries 10 marks and may have a, b as sub questions.

PART- A

(10*2 Marks = 20 Marks)

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|-------|---|----|-----|----|
| 1. a) | Define Picture Function? | 2M | C01 | C1 |
| b) | What is the purpose of run length coding? | 2M | C01 | C1 |
| c) | Define Image restoration? | 2M | C02 | C1 |
| d) | Discuss about Image smoothing? | 2M | C02 | C1 |
| e) | What is the importance of texture identification? | 2M | C03 | C1 |
| f) | Give color triangle for normalized RGB coordinates? | 2M | C03 | C1 |
| g) | What is the importance of database organization? | 2M | C04 | C1 |
| h) | Write an algorithm to derive motion vectors for interesting points? | 2M | C04 | C1 |
| i) | How to identify high level structures in images? | 2M | C05 | C1 |
| j) | What is image segmentation? | 2M | C05 | C1 |

PART- B

(10*5 Marks = 50 Marks)

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|-------|--|----|-----|----|
| 2. a) | Explain about application problems of computer vision? | 5M | C01 | C2 |
| b) | What are the basic operations in morphology? Explain. | 5M | C01 | C3 |

OR

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|----|--|-----|-----|----|
| 3. | What are the common region properties? Explain about any five region properties? | 10M | C01 | C2 |
|----|--|-----|-----|----|

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|-------|--|----|-----|----|
| 4. a) | Describe about Median filtering? | 5M | C02 | C3 |
| b) | Explain about Decision tree algorithm? | 5M | C02 | C2 |

OR

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|----|--------------------------------------|-----|-----|----|
| 5. | Write a short note on following | 10M | C02 | C6 |
| a) | Precision and Recall | | | |
| b) | Empirical error rate and reject rate | | | |

- 6 a) Explain about color histogram? 5M C03 C2
b) Write a short note on image segmentation? 5M C03 C3
- OR**
- 7 Explain about the following Quantitative texture measures
a) Co-occurrence matrices and features 10M C03 C2
b) Local binary partition
- 8 a) Explain about texture similarity image distance measures? 5M C04 C2
b) Explain about how to detect changes between two images? 5M C04 C2
- OR**
- 9 Describe about B+ tree based indexes and spatial indexes? 10M C04 C6
- 10 a) Explain about methods to represent regions? 5M C05 C2
b) Explain about fitting models to segments? 5M C05 C2
- OR**
- 11 Explain about 2D object recognition using
a) Affine mapping functions b) Relational Matching? 10M C05 C3

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