



25024929

QP CODE: 25024929

Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, APRIL 2025

Fourth Semester

M Sc Artificial Intelligence

ELECTIVE - AI810403 - COGNITIVE SCIENCE - COMPUTER VISION

2020 ADMISSION ONWARDS

244D3044

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. What is Computer Vision?
2. Discuss about Recursive labelling algorithm for the connected components labelling operations.
3. Define RAG.
4. Discuss about precision and recall.
5. Define RGB color bases.
6. Explain the two approaches to texture analysis.
7. Discuss about trajectories of three objects and two objects.
8. Discuss Image flow equation.
9. Explain baseline and disparity.
10. Explain the registration step in object reconstruction process.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Explain about the different methods for finding neighbourhoods of a pixel.
12. What is mask? With the help of an example, explain how to apply a mask to an image.
13. Briefly explain some applications of binary morphology.





14. With the help of an example, explain any 3 region properties.
15. Explain about co-occurrence matrix with example.
16. Discuss about different methods for representing regions.
17. Explain about Discrete Relaxation.
18. Explain constrained linear optimization.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. (a) Explain about different digital image format (b) Discuss in detail about Five Frames of References.
20. Briefly explain about (a)Texture and texel-based texture descriptions (b)Quantitative texture measures
21. Give an overview on the following (a) Standard indexes (b) Spatial indexing (c) Indexing for content-based image retrieval with multiple distance measures.
22. Discuss the methods used for recognizing 2D objects through mappings of model points onto image points.

(2×5=10 weightage)

