G 8228

00008228

Reg. No...............................

Name...................................

M.Sc. COMPUTER SCIENCE (C.S.S.) DEGREE (SPECIAL MERCY CHANCE) EXAMINATION, JANUARY 2025

Second Semester

MCS 2C4—COMPUTER GRAPHICS AND DIGITAL IMAGE PROCESSING

(2012–14 Admissions)

Time : Three Hours | Maximum Weight : 30

Part A (Short Answers)

Answer any **five** *questions.*
Each question carries a weight of 1.

1. List out the merits and demerits of Plasma panel display.
2. What is Polygon clipping ?
3. What are the various representation schemes used in three dimensional object ?
4. Differentiate parallel projection from perspective projection.
5. Mention the stopping conditions applied in area subdivision method.
6. Define computer graphics animation.
7. What is the use of image subtraction ?
8. What is the difference between lossless and lossy image compression ?

$(5 \times 1 = 5)$

Part B (Short Essays)

Answer any **five** *questions.*
Each question carries a weight of 2.

9. Explain Raster scan systems and Random Scan Systems.
10. Explain in detail about the Line drawing DDA scan conversion algorithm.
11. Explain about 3D object representation.
12. Derive the matrix for 3 dimensional rotations.
13. What are the various animation techniques ? Explain.
14. Describe the elements of visual perception.

Turn over

15. Explain different types of intensity transformations.

16. Explain Spatial filtering in image enhancement.

(5 × 2 = 10)

Part C (Long Essays)

Answer any **three** *questions.*
Each question carries a weight of five.

17. Explain (i) Hard Copy devices (ii)Graphics Software

18. Explain in detail the Sutherland-Hodgeman clipping algorithm with an example

19. Write a note on the following :

    (i) NTSC. (ii) SECAM.

20. With suitable examples explain all 3D viewing methods.

21. Write short notes on sampling and quantization.

22. What is enhancement by point processing ? Explain with example.

(3 × 5 = 15)