# FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION APRIL 2023

B.C.A.

### BCA 4C 08—COMPUTER GRAPHICS

(2019 Admission onwards)

Time: Two Hours

Maximum: 60 Marks

#### Section A

Answer any **ten** questions. Each question carries 2 marks.

- 1. Distinguish between Persistence and resolution.
- 2. Explain the importance of frame buffer.
- 3. What is the principle behind raster scan display system?
- 4. Explain why homogeneous co-ordinate representation is used.
- 5. Explain the role of decision parameter in Bresenham's line drawing algorithm.
- 6. Give the DDA line drawing algorithm function.
- 7. What is window to viewport transformation?
- 8. Explain the strategies used in Sutherland Hodgeman polygon clipping algorithm.
- 9. Explain different color models.
- 10. How can we draw a circle with GIMP?
- 11. What are the file formats supported in GIMP?
- 12. Distinguish between emissive and non-emissive displays.

 $(10 \times 2 = 20 \text{ marks})$ 

#### **Section B**

Answer any **six** questions. Each question carries 5 marks.

- 13. Explain the two-dimensional transformations in detail.
- 14. Briefly describe the techniques used in color CRT monitors.

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- 15. Explain Bresenham's circle generating algorithm.
- 16. Describe Cohen Sutherland line clipping algorithm
- 17. Write short notes on reflection and shear.
- 18. Distinguish between raster and random scan methods.
- 19. Explain the applications of GIMP.

 $(6 \times 5 = 30 \text{ marks})$ 

## **Section C**

Answer any **one** question.

The question carries 10 marks.

- 20. Explain the working of Refresh CRT.
- 21. Explain scan line polygon filling algorithm.

 $(1 \times 10 = 10 \text{ marks})$