C 61267 (Pages : 2) Name.....

Reg. No.....

FOURTH SEMESTER B.C.A. DEGREE EXAMINATION, APRIL 2019

(CUCBCSS—UG)

B.C.A.

BCA 4C 08—COMPUTER GRAPHICS

(2017 Admissions)

Time : Three Hours Maximum : 80 Marks

Section A

Answer **all** *the questions.*
Each question carries 1 *mark.*

1. What is true color system ?
2. What is the use of a frame buffer ?
3. What is scan conversion ?
4. What property of circle is made use of in midpoint circle algorithm ?
5. What is reflection ?
6. Give the matrix equation for rotation.
7. What is point clipping ?
8. What is window to viewport transformation ?
9. What are color models ?
10. What are the file formats supported in GIMP ?

(10 × 1 = 10 marks)

Section B

Answer **all** *the questions.*
Each question carries 2 marks.

11. Distinguish between bitmap and pixmap.
12. What is shadow mask method ?
13. Explain the role of decision parameter in Bresenham's circle drawing algorithm.
14. How will you retrieve the current frame buffer intensity setting for a specified location ?
15. Explain shear transformation.

Turn over

16. Compare modelling co-ordinates and world co-ordinates.

17. Explain Color Look up table.

18. What is the main difference between magic wand and select by color ?

(8 × 2 = 16 marks)

Section C

Answer any **six** *questions.*
Each question carries 4 *marks.*

19. Explain any four applications of computer graphics.

20. Differentiate the applications of high persistent and low persistent phosphor in CRT.

21. How line drawing is accomplished in CRT ?

22. What are the two approaches to area filling in CRT ?

23. Explain the steps to perform pivot point rotation.

24. Explain the procedure to check the position of a point with respect to the clip window.

25. Explain CIE chromaticity diagram.

26. Explain how do we save a selected sub-image to a file in GIMP ?

(6 × 4 = 24 marks)

Section D

Answer any **three** *questions.*
Each question carries 10 *marks.*

27. Briefly explain the working of Raster and random scan displays.

28. Explain DDA line drawing algorithm.

29. Describe how homogeneous co-ordinates influence 2D transformations.

30. Explain Sutherland Hodgeman polygon clipping algorithm.

31. Explain the image editing operations using GIMP.

(3 × 10 = 30 marks)