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B.Sc./6th Sem (H)/COMS/23(CBCS)

2023

**6th Semester Examination**  
**COMPUTER SCIENCE (Honours)**

**Paper : C 14-T**

**[Computer Graphics]**

**[CBCS]**

Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

**Group - A**

Answer any *five* questions.

2×5=10

1. What do you mean by image resolution?
2. What is dot pitch?
3. Define frame buffer.
4. What is impact and non-impact printer?
5. What is clipping?
6. What is digitizer?
7. Write three applications of computer graphics.
8. What do you mean by aspect ratio?

P.T.O.

( 2 )

**Group - B**

Answer any *four* questions.

5×4=20

9. Use Bresenham's line drawing algorithm to find points on a line between (2, 2) and (10, 4).
10. Briefly describe about CRT monitor.
11. Write down the difference between random scan and raster scan display.
12. Write and explain boundary fill algorithm.
13. Explain about 2-D rotation about origin.
14. Derive the transformation matrix for window to viewport transformation.

**Group - C**

Answer any *one* question.

10×1=10

15. Briefly describe mid-point circle drawing algorithm. Plot a circle using mid-point circle drawing algorithm where radius = 10 units, and center at (0, 0).  
5+5
  16. Write down the Cohen-Sutherland line clipping algorithm. Brief explain about polygon clipping.  
7+3
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