

NOVEMBER/DECEMBER 2020

BECS54B — COMPUTER GRAPHICS

Time : Three hours

Maximum : 75 marks

SECTION A — ($10 \times 2 = 20$ marks)

Answer ALL questions.

1. What is raster scan system?
2. What are the disadvantages of DDA algorithm?
3. Give curve attributes.
4. Define Transformation.
5. What is text clipping?
6. Give the logical classification of Input devices.
7. What is perspective projection?
8. What is viewing volume?
9. How to get normal vector (N) for a 3D surface, polygon?
10. Write the principle of depth sorting method.

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SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Discuss the Hard copy devices.

Or

- (b) Define frame buffer and aspect ratio.

12. (a) Discuss Inquiry function.

Or

- (b) Explain the following composite transformations

- (i) Translation
- (ii) Scaling.

13. (a) Define view port. What is window to view port coordinate transformation?

Or

- (b) What is polygon clipping? What are the various types of polygon clipping?

14. (a) Describe about 3D translation and rotation.

Or

- (b) Write about viewing coordinates and its pipeline.

15. (a) Compare Z – buffer and ray casting methods with respect to memory and speed.

Or

- (b) Describe the steps in BSP tree method for detecting visible surface.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Write down and explain the midpoint circle drawing algorithm. Assume 10 cm as the radius and co-ordinate as the centre of the circle.
17. Explain in detail about basic transformation.
18. Write about Cohen-Sutherland line clipping algorithm with an example.
19. Discuss on 3D clipping and 3D viewing transformation.
20. Explain scan line method with its implementation issues.
