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DECA506

Reg. No.

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V Semester B.C.A. Degree Examination, January/February - 2025

COMPUTER SCIENCE

Computer Graphics

(NEP Scheme F+R)

Time : 2½ Hours

Instructions to Candidates:

Answer All Sections.



Maximum Marks : 60

SECTION - A

I. Answer any Four questions. Each question carries Two marks. (4×2=8)

1. What is an image processing?
2. Mention any four applications of computer graphics.
3. Define Transformation.
4. List out various types of text clipping.
5. Define window and viewport.
6. What is gravity field effect?

SECTION - B

II. Answer any Four questions. Each question carries Five marks. (4×5=20)

7. Explain the different factors affecting the CRT. (5)
8. Explain midpoint circle drawing algorithm. (5)
9. What is 2D reflection? Explain in detail. (5)
10. Explain Cohen Sutherland algorithm for the clipping with suitable illustration. (5)
11. Differentiate between parallel projection and perspective projection. (5)
12. Define Segment. Explain different attributes of Segment. (5)

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SECTION - C

III. Answer any Four questions. Each question carries Eight marks. (4×8=32)

13. Explain shadow mask method in color CRT with neat diagram and write it's advantages. (8)
14. Draw the line for given end points (20, 10) and (30, 18) using Bresenham's line drawing algorithm. (8)
15. Define Composite Transformation. Prove that two successive translations are additive and two successive scalings are multiplicative. (8)
16. With the neat diagram explain polygon surfaces and polygon tables. (8)
17. Explain depth buffer algorithm for hidden surface elimination. (8)
18. Write a note on:
 - i) Light Pen. (4)
 - ii) Direct View Storage Tube (DVST). (4)