Roll No ....

MCADD-504
M.C.A. (Integrated), V Semester
Examination, May 2023
Computer Graphics
Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) How computer graphics is used in Information Technology?   7

   b) Write in brief about various interactive output devices.

   7

2. a) Write Bresenham's algorithm for scan conversion of a Circle.   7

   b) Draw a circle with radius 10 and centre coordinates (25, 20) using Bresenham's circle drawing algorithm. 7

3. a) Differentiate between 2D Rotation and 3D Rotation.   7

   b) Discuss the concept of Boundary-Fill. How it is different form Flood-fill.   7

4. a) Discuss in detail various solid modeling techniques.   7

   b) Discuss Primitive Instancing in details.   7

5. a) Discuss B-reps in detail.   7

    b) Discuss spatial partitioning representation.   7

6. a) Why is it easier to locate hidden surfaces when parallel
        projection is used?   7

    b) Using a 2×2 pixel display, show how the Z-buffer
        algorithm would determine the color of each pixel for
        the given objects Z and B.   7

7. a) How does edge coherence help to reduce computational
        effort?   7

    b) Prove that any two successive rotations about a given
        rotation axis is commutative.   7

8. a) What steps are required to plot a line whose slope is
        between 00 and 450 using Bresenham's method?   7

    b) What steps are required to generate a circle using the
        polynomial method?   7

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