Total No. of Questions : 8]   [Total No. of Printed Pages : 2

Roll No ....

IT-602
B.E. VI Semester
Examination, June 2017
Computer Graphics and Multimedia

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Explain beam penetration and shadow mask color monitor with diagram.
    b) Explain following:
       i) Rubber band techniques
       ii) Positioning techniques

2. a) Explain the role of pixel and frame buffer in graphics devices.
    b) Calculate values of pixels which is scan converted by DDA algorithm and end point of line is (4, 4) and (−3, 0).

3. a) Explain Bresenham's algorithm for circle drawing with the help of an example.
    b) Write an algorithm to draw Bezier curves.

4. a) Explain Sutherland Hodgemon Polygon Clipping algorithm. Why this algorithm works for only Convex clipping region?

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b) Show that composition of two rotations is additive by concatenating the matrix representation for $R(\theta_1)$ and $R(\theta_2)$ to obtain $R(\theta_1) * R(\theta_2) = R(\theta_1 + \theta_2)$.

5. a) Reflect the polygon (−1, 0), (0, −2), (1, 0) and (0, 2) about the line y = 2 by using transformations matrix.
    b) Explain issues related to three dimensional display methods. Compare parallel projection and perspective projection methods for 3D objects.

6. a) Differentiate between;
       i) Diffuse Vs Specular reflection
       ii) Phong Vs Gourand shading.
    b) Give a brief note on evolving technologies of multimedia.

7. a) Explain briefly:
       i) Multimedia deposes.
       ii) Multimedia Authoring tools.
    b) Describe the architecture of a multimedia system.

8. a) Differentiate between lossless and lossy compression? Explain any one lossless compression method with an example.
    b) Write short note:
       i)   Storage technologies
       ii) JPEG
       iii) MPEG

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