Sl. No.

B44-R4 : COMPUTER GRAPHICS AND MULTIMEDIA SYSTEMS

NOTE :
1. **Answer question 1 and any FOUR questions from 2 to 7.**
2. **Parts of the same question should be answered together and in the same sequence.**

Total Time : 3 Hours   **Total Marks : 100**

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1. (a) What is the flood fill algorithm ? Explain with a diagram.
   (b) Which are the types of video file format ? Write at least two and explain.
   (c) What is the use of line clipping algorithm ? How it works ?
   (d) What is Hermite Curve ? Which are the advantages and disadvantages of it ?
   (e) Explain any two common multimedia tools.
   (f) Explain Shear Transformation.
   (g) What is the difference between Plasma and Liquid Crystal Display ? Explain. **(7x4)**

2. (a) What is the use of digital camera ? How it works? How it is different than the analog camera ?
   (b) Explain Boundary fill algorithm.
   (c) What is projections in graphics ? Which are the types of it ? Explain any one in detail. **(6+6+6)**

3. (a) Explain DDA algorithm in computer graphics. What are the advantages and disadvantages of DDA algorithm ?
   (b) What is image file format ? Which are the types of image file format ? Explain in detail. **(9+9)**

4. (a) Explain Bresenham's circle drawing algorithm. Write merits and demerits of this algorithm.
   (b) Write the use cases of multimedia applications.
   (c) What is Random Scan display and Raster Scan Display ? Differentiate them. **(6+6+6)**

5. (a) What is MPEG stands for in video compression ? How it works ? Explain in detail.
   (b) What are the factors which determine the lighting effect in illumination models ? What are the types of illumination models ? Explain. **(9+9)**

6. (a) What is shading in computer graphics ? Which are the types of it ? Explain any two types of shading methods.
   (b) What is the use of Midpoint Sub-division algorithm ? Write this algorithm.
   (c) Write a short note: Cathode Ray Tube (CRT). **(6+6+6)**

7. (a) What is transformation in graphics ? Which are the operations in 2D Geometrical transformation ? Explain at least three operations.
   (b) What is Multimedia ? Which are the types of multimedia ? Explain in detail. **(9+9)**

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