Subject Code—2081

MCA (Fourth Year) EXAMINATION

(Five Year Integrated Course)

COMPUTER GRAPHIC AND MULTIMEDIA

MCA-401

Time : 3 Hours   *Maximum Marks : 100*

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) Differentiate Analog and Digital display devices. We prefer to use digital devices, why ? Comment.

   (b) Differentiate Pixel and Raster Line.

   (c) How are interactive and non-interactive devices different ?

   (d) Describe merits and demerits of conventional CRT, Liquid. Crystal and Plasma Panels. Which is the technology of future ? Justify your answer.   **4×5=20**

2. (a) Explain any algorithm for drawing line. Also discuss merits and demerits of the algorithm described by you VIS-A-VIS other algorithms in your course.

(b) What is Aliasing and can this be minimised during display ? **12+8=20**

3. (a) What is the difference between Window Port and View Port ? Give steps required to transform an object from Window Port to View Port.

(b) Why clipping is required ? Describe Southerland-Cohn approach for clipping. **10+10=20**

4. (a) Why do we use homogeneous coordinate system for various 2-D and 3-D Transformations ? Discuss

(b) An object is to be rotated by 45° CN Anticlockwise direction about an axis passing through points (-10, 9, 5) and (0, 5, 0). Discuss the steps and develop composite matrix for achieving this. **5+15=20**

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8. Write short notes on the following :

(a) Hidden surfaces

(b) Importance of visualization

(c) Use of Primitives in graphics

(d) Resolution of CRT. **4×5=20**