

Roll No.

Total Pages : 03

BCA/M-23

1878

COMPUTER GRAPHICS

BCA-363

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) What is the meaning and purpose of refresh rate ?
- (b) State the purpose of a lookup table.
- (c) State the various side effects of scan conversion ?
- (d) Enlist the various methods to draw a line in computer graphics.
- (e) What is meant by inverse transformations ?
- (f) Enlist the various pointing techniques used in computer graphics.
- (g) What do you mean by viewing transformation ?
- (h) - Enlist the various three-dimensional display methods.

8×2=16

Unit I

2. Explain working of (i) Colour CRT monitors and (ii) LCD monitors, in detail along with advantages and disadvantage of both in detail. 16

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3. Write short notes on the following :
- (i) Interlacing
 - (ii) General purpose graphics software. 16

Unit II

4. Write down the algorithm for drawing a line using DDA line algorithm and explain its steps using suitable example. 16
5. (a) Write down the steps to plot a line using the slope method. 8
- (b) Write and explain the flood fill algorithm. 8

Unit III

6. How can you perform ? 16
- (i) Scaling
 - (ii) Translation
 - (iii) Rotation
 - (iv) Reflection, in two-dimensional transformation ?
7. Write short notes on the following : 16
- (i) Gravity field technique
 - (ii) Rubber band technique
 - (iii) Inking and painting
 - (iv) Dragging.

Unit IV

8. Write and explain the Sutherland-Hodgeman algorithm for polygon clipping. 16
9. Define window and viewport. Derive window to viewport transformation. 16