

Paper Code & Roll No. to be filled in your Answer Book

Roll No. 

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Odd Semester Examination-2016

**BCA (Semester-V)**  
**COMPUTER GRAPHICS**

[Time : 3 Hours]

[Maximum Marks :70]

**Note :** Attempt **all** the questions.

1. Answer **any four :**

[4x5=20]

- (a) What is Computer Graphics? Give its advantages. What are the application areas of Computer Graphics?
- (b) Explain briefly about the working of cathode ray tube.
- (c) What do you understand by input/output devices? Explain any three.
- (d) Explain the advantages and disadvantages of Random Scan.

- (e) How to display straight lines & curved lines?  
Explain in brief.

2. Answer any two : [6x2=12]

- (a) Explain in detail the Raster Scan Display and Liquid Crystal Display with the help of a diagram.
- (b) Write the short note on the following :
- (i) Rubber Band techniques
  - (ii) Frame Buffer & pixels
- (c) What are the new coordinates of the point P(2,-4) after the rotation by 30 degrees ? Draw the diagram also.

3. Answer any two : [6x2=12]

- (a) What is DDA? Write a program to draw a line using DDA.
- (b) Find the transformation that scales a unit in x- direction.
- (c) What do you understand by polygons? What are the different types of polygons?

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4. Answer any two :

[6x2=12]

- (a) What are the steps required for creating or deleting a segment?
- (b) What is Morphing? How is it useful in computer graphics?
- (c) How flood fill algorithm differs from the boundary fill algorithm? Explain.

5. Answer any two :

[7x2=14]

- (a) What is windowing? Differentiate between window and a viewport.
- (b) Define Parallel Projection & Perspective Projection with suitable example.
- (c) Perform 45-degree rotation of a triangle about the origin A(0,0), B(1,1), C(5,2).

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