

BCA 403

B.C.A. (PART-II) EXAMINATION

(Fourth Semester)

Paper : III

Computer Graphics

5521



Time : Three Hours]

[Maximum Marks : 70

- Note:** (i) Answer **Five** Questions in all.  
(ii) Question No. **1** is Compulsory.  
(iii) Answer remaining **four** questions, selecting **two** questions from each Section **A** and **B**.  
(iv) All questions carry equal marks.
1. Answer **all** parts of the following :
- (a) What do you understand by Computer Graphic Image Processing ?  
(b) Define pixel and resolution.  
(c) What is basic concept of View Plane ?  
(d) Define convex and concave polygon.

**Section-A**

2. Explain the Cathode Ray Tube (CRT) monitor display.
3. What is DDA ? Draw a line having end points (20, 10) and (30, 20) using DDA line drawing algorithm.

4. Derive the Midpoint circle algorithm for drawing a circle with suitable example.
5. What is projection in 3D viewing. Distinguish between parallel and perspective projection ?

### Section-B

6. Differentiate between the following :
  - (a) Shadow mask and Direct view storage tube monitor.
  - (b) Differentiate between interactive and passive devices.
7.
  - (a) Explain Scan-Line Polygon Fill Algorithm with example.
  - (b) Explain Cohen-Sutherland Polygon Clipping Algorithm with example.
8.
  - (a) What is Geometric Transformation ? Explain Reflection and Shear ?
  - (b) Briefly discuss about Matrix Representation and Homogenous Coordinate 2D transformation.
9. Write notes on any two of the following :
  - (a) Graphics softwares
  - (b) Colour Models
  - (c) Vanishing Points in projection

