# Mid Semester Examination

*Name of the Program:* BCA

*Semester: V I*

*Course Code: TBC601*

*Name of the Course:* Computer Graphics

Time: 1-1/2 Hour

Maximum Marks: 50

**Note:**

(i) Answer **all the questions** by choosing *any one of the sub questions*.
(ii) Each question carries 10 marks

| Q1 | (10 marks) | |
|---|---|---|
| (a) | Define persistence, resolution, retracing and aspect ratio. | CO1 |
| | OR | |
| (b) | What is the difference between DDA and Bresenham's line generation algorithm? | |
| **Q2** | (10 marks) | |
| (a) | Digitize a line from (10,12) to (15,15) on a raster screen using Bresenham's straight line algorithm. | CO1 |
| | OR | |
| (b) | Explain about Random and Raster scan systems. | |
| **Q3** | (10 marks) | CO2 |
| (a) | Explain the Delta-Delta Shadow masking and Beam penetration method of colored system. | |
| | OR | |
| (b) | (i) Find the refresh rate of a 512X512 frame buffer, if the access time for each pixel is 200 nanoseconds.<br>(ii) Find the amount of memory required by an 8-plane frame buffer each of red, green and blue, having 1024X768 resolution. | |
| **Q4** | (10 marks) | CO2 |
| (a) | What is the need of lookup table? Give the organization of a color look up table providing 12 bits per entry, per color for pixel position and with 8 bits per pixel in the frame buffer. | |
| | OR | |
| (b) | Compare DVST and refresh display. List the properties of phosphor used in CRT monitors. | |
| **Q5** | (10 marks) | |
| (a) | What do you mean by a vector? What are the properties of a vector? How do we perform the mathematical operations using vector? Explain it through proper example. | CO3 |
| | OR | |
| (b) | Explain the properties and working process of following display devices:<br>Plasma panels, LCD and Plotter | |