MS – 516

# VI Semester B.C.A. Degree Examination, May/June 2013
## (Y2K8 Scheme)
## COMPUTER SCIENCE
## BCA 603 : Computer Graphics

Time : 3 Hours Max. Marks : 90

***Instruction :*** *Answer* ***all*** *Sections.*

SECTION – A

I. Answer **any 10** questions. **(10×2=20)**

1) Mention the applications of computer graphics.
2) What is vector display ?
3) What are character attributes ?
4) Define DDA line drawing algorithm.
5) Explain the concept of reflection transformation.
6) How are objects made to grow or shrink in a 2-D transformation ?
7) What is a viewport ? Explain.
8) What are the 3-D display techniques ?
9) Explain 2D-translation.
10) How are segment files stored ?
11) Explain rubber band method of creating an image.
12) Give the advantages of Touch Screen.

SECTION – B

II. Answer **any 5** questions. **(5×5=25)**

13) Compare Raster scan and Random scan display.
14) Explain character attributes.
15) Write the steps involved in 2-D scaling about an arbitrary point.
16) Explain 2-D translation and rotation of a composite transformation.

**P.T.O.**

17) Compare parallel and perspective projections.

18) How are segment files stored ? Explain.

19) Explain dynamic manipulations techniques for graphical input.

20) Write short note on :
    a) Joystick
    b) Trackball.

SECTION – C

III. Answer **any 3** questions. **(3×15=45)**

21) a) Explain the factors on which classification of a CRT depends. **8**
    b) With a neat diagram explain the working of a shadow mask method. **7**

22) a) Explain Bresenham's line algorithm with an example. **9**
    b) Explain the different line attributes. **6**

23) a) Explain the classification of hidden surface and hidden line algorithms. **8**
    b) What are polygon surfaces and polygon tables ? Explain. **7**

24) a) Explain Cohen-Sutherland line clipping algorithm with an example. **9**
    b) Explain shear transformations with suitable illustrations. **6**

25) Write short notes on :
    a) Light pen **5**
    b) Menu selection **5**
    c) Octrees. **5**