SM – 635

VI Semester B.C.A. Examination, May/June 2018
(Y2K8 Scheme) (Repeaters)
COMPUTER SCIENCE
BCA 603 : Computer Graphics

Time : 3 Hours Max. Marks : 100

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

SECTION – A

Answer **any ten** questions. **Each** question carries **two** marks. **(10×2=20)**

1. Define Raster Scan Display.
2. What is CRT ?
3. Explain terms persistence and resolution.
4. What is Translation ?
5. What are the different fill styles to fill polygon ?
6. Distinguish between window port and view port.
7. What is the use of Clipping ?
8. Define Projection.
9. Define segment and give any two segment operations.
10. What is the concept of multiple selection ?
11. Explain gravity field effect.
12. What are 2 types of graphical interactive devices.

SECTION – B

Answer **any five** questions. **Each** question carries **five** marks. **(5×5=25)**

13. Explain five applications of computer graphics.
14. Give different attributes for line in detail.
15. Define matrix representation of 2D transformation, translation and scaling.

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16. Explain Cohen-Sutherland algorithm for line clipping.

17. Explain about Bezier Curves.

18. What is the use of segment and explain segment attributes.

19. Distinguish between pointing and positioning devices.

20. Explain in detail about keyboard in graphical input device.

SECTION – C

Answer **any three** questions. **Each** question carries **fifteen** marks. **(3×15=45)**

21. a) Explain working of shadow mask CRT with a neat diagram. **10**
    b) Differentiate between raster scan and random scan display. **5**

22. a) How are color and graphical levels displayed. Discuss. **7**
    b) Write Bresenham's circle algorithm to plot a circle of radius r = 10 and center as origin for first quadrant only. **8**

23. a) Explain reflection and shear matrix representations. **7**
    b) Explain about homogenous 2D transformation. **8**

24. a) Explain Polygon surfaces. **5**
    b) Discuss the algorithm for hidden surface removal. **10**

25. Write short notes on : **(5+5+5)**
    a) Rubber band method
    b) Grid constraints
    c) Dragging

SECTION – D

Answer **any one** question. **Each** question carries **ten** marks. **(1×10=10)**

26. a) Explain DDA algorithm for circle drawing. **(5)**
    b) Explain 3D rotation in detail. **(5)**

27. a) What is menu selection ? Explain. **(5)**
    b) Explain different actions performed by touch screen in graphical input device. **(5)**