C 21126

SIXTH SEMESTER B.C.A DEGREE EXAMINATION, APRIL 2017

(CUCBCSS—UG)

BCA 6B 18 (E1)—COMPUTER GRAPHICS

Time : Three Hours   Maximum : 80 Marks

Part A
Answer *all* the questions (Each question carries 1 mark.)

1. Each screen point on the screen is referred as _____ .

2. In _____ systems the electron beam is directed only to the parts of the screen where a picture is to be drawn.

3. The ratio of vertical points to horizontal points necessary to produce equal-length lines in both directions on the screen is known as the _____ .

4. PHIGS stands for _____ .

5. In display, the term TFT stands for _____ .

6. For lines with positive slope less than or equal to one, the DDA line algorithm samples at unit _____ intervals.

7. The _____ transformation alters the size of the object.

8. In reflection, if the reflection axis is a line in the xy plane, the rotation path about this axis is in a plane _____ to the xy plane..

9. Unequal values sx, and sy in scaling transformation are known as _____ scaling.

10. A world-coordinate area selected for display is called _____ .

(10 x 1 = 10 marks)

Part B
Answer *all* questions (Each question carries 2 mark.)

11. What is resolution ?

12. What is frame buffer ?

13. What do you mean by antialiasing ?

14. What is clipping ?

15. What is orthographic parallel projection ?

(5 x 2 = 10 marks)

Part C
Answer *any five* questions (Each question carries 4 mark.)

16. Discuss any four applications of computer graphics ?

17. How colour information is stored in the frame buffer ?

18. Explain the basic video controller refresh operations.

19. Write note on LCD.

20. Write down Bresenhams line drawing algorithm.

21. What is Text clipping ? Explain different techniques.

22. Explain three-dimensional Translation and Scaling.

23. Explain raster method for transformations ?

(5 x 4 = 20 marks)

Part D
Answer *any five* questions (Each question carries 8 mark.)

24. Explain the shadow-mask method used in colour CRT.

25. Briefly explain popular graphics input devices.

26. Discuss about various hard copy devices.

27. How lines are generated using DDA line algorithm.

28. Explain the basic two dimension transformations.

29. Explain window to viewport co-ordinate transformation.

30. Explain Cohen-Sutherland line clipping algorithm.

31. Write short notes on a) Interlacing b) Plasma panels c) Point clipping
d) Rubber-band method.

(5 x 8 = 40 marks)