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Reg. No. : .....

Name : .....

Fifth Semester B.Sc./B.C.A. Degree Examination, December 2018
Career Related FDP Under CBCSS
Group 2(b) : Computer Science/Computer Applications
CS 1543/CP 1542 : COMPUTER GRAPHICS
(2014 Admn. Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – A

(Very short answer type)

One word to maximum of **one** sentence. Answer **all** questions. **Each** question carries **one** mark. **(10×1=10 Marks)**

1. Define pixel.
2. What is resolution ?
3. What is anti-aliasing ?
4. What is refresh buffer ?
5. What is transformation ?
6. What is Rotation ?
7. What is shearing ?
8. What do you mean by perspective projection ?
9. What is a color model ?
10. What is Morphing ?

P.T.O.

SECTION – B

(Short answer type)

Not to exceed **one** paragraph. Answer **any eight** questions. **Each** question carries **two** marks. **(8×2=16 Marks)**

11. What is a raster scan system ?
12. What are the output hardware devices used for computer graphics ?
13. What is computer graphics ?
14. Explain boundary fill algorithm.
15. Explain the advantages and disadvantages of DDA algorithm.
16. What are homogeneous co-ordinates ?
17. Define clipping? And types of clipping.
18. What are the important properties of Bezier Curve ?
19. Explain Window-to-Viewport mapping.
20. What are the two types of projections ?
21. Explain Wire Frame Model.
22. State the difference between CMY and HSV color models.

SECTION – C

(Short essay)

Not to exceed **120** words. Answer **any six** questions. **Each** question carries **four** marks. **(6×4=24 Marks)**

23. Digitize a line from (20, 22) to (25, 25) on a raster screen using Bresenham's straight Line algorithm.
24. What is LCD ? Explain its advantages and disadvantages.
25. Explain Digital Differential Analyzer (DDA) Line drawing algorithm.

26. Explain scaling of 2D objects with example.

27. Explain Depth buffer.

28. Explain about B-Spline curves.

29. With suitable examples, explain any one of the 3D transformations.

30. Explain Back face detection.

31. Explain in detail about CMY color model.

SECTION – D

(Short Essay)

Answer **any two** questions. **Each** question carries **15** marks. **(2×15=30 Marks)**

32. Explain any four input devices.

33. Write a detailed note on the basic two dimensional transformations.

34. Explain Sutherland-Hodgeman polygon clipping algorithm with suitable example.

35. Explain the concept of projection.
