



K22U 2297

Reg. No. :

Name :

**V Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, November 2022
(2019 Admission Onwards)
CORE COURSE IN COMPUTER SCIENCE
5B11 CSC-C : Computer Graphics**

Time : 3 Hours

Max. Marks : 40

**PART – A
Short Answer**

Answer **all** questions :

(6×1=6)

1. Define scan conversion.
2. What is the abbreviation of DDA ?
3. The process of filling an area with rectangular pattern is called _____
4. The translation distances (dx, dy) is called as _____
5. What is Shearing ?
6. The object space or the space in which the application model is defined is called _____

**PART – B
Short Essay**

Answer **any six** questions :

(6×2=12)

7. Define Shearing.
8. Differentiate between Raster and Vector Graphics.
9. What is dithering ?
10. What is a polygon mesh ? What are the 3 main components of a 3D polygon mesh ?
11. List out the merits and demerits of DVST.

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12. Define Aspect Ratio.
13. Define window and viewport.
14. What is Projection ?

PART – C
Essay

Answer **any four** questions :

(4×3=12)

15. Perform window to viewport transformation for the point (20, 15). Assume that (X_{wmin}, Y_{wmin}) is (0, 0); (X_{wmax}, Y_{wmax}) is (100, 100); (X_{vmin}, Y_{vmin}) is (5, 5); (X_{vmax}, Y_{vmax}) is (20, 20); find the value of x and y in the viewport.
16. Explain DDA algorithm with suitable example.
17. What do you mean by emissive and non-emissive displays?
18. Explain scaling with suitable example.
19. How many steps are involved in converting the world coordinates of a scene to device coordinates ? What are they ?
20. What is computer graphics ? What are the components of a computer graphics system ?

PART – D
Long Essay

Answer **any two** questions :

(2×5=10)

21. Explain any four input devices in detail.
 22. Explain 2D transformations with suitable examples.
 23. What is meant by polygon clipping? Explain Sutherland Hodgeman Algorithm.
 24. Difference between parallel projection and perspective projection.
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