

Sl. No. 100018

No. of Printed Pages : 2



GN-535

V Semester B.Voc. Examination, December - 2019
(CBCS - F+R) (2018-19 and Onwards)

INFORMATION TECHNOLOGY

Paper - 504 : Computer Graphics and Visualization

Time : 3 Hours

Max. Marks : 70

Instruction : Answer *all* Sections.

SECTION - A

I. Answer **any ten** of the following questions :

10x2=20

1. Define Computer Graphics.
2. Define Persistence and Resolution.
3. What is staircase effect ?
4. What is Pixel ?
5. Define Reflection in 2D Transformation.
6. What is line cap ? List any two line caps.
7. Give a 3×3 transformation matrix to reduce an object to half of its original size.
8. What is exterior clipping ?
9. What is an octree ?
10. What is depth cueing ?
11. Define Frame Buffer.
12. What are the two types of graphical interaction devices ?

P.T.O.

**SECTION - B****II. Answer any five full questions :****5x10=50**

- 13.** (a) Explain any five applications of computer graphics. **5**
(b) Define Circle. Write DDA circle algorithm. **5**
- 14.** (a) With a neat diagram, explain the working of a shadow mask CRT. **5**
(b) Explain difference between Random Scan and Raster Scan Systems. **5**
- 15.** (a) Give different attributes for line in detail. **5**
(b) Explain scan line algorithm for area filling. **5**
- 16.** (a) What is transformation ? Explain two dimensional translation rotation and scaling with an example. **5**
(b) Explain Window to Viewport transformation. **5**
- 17.** (a) Write short notes on Curve Clipping. **5**
(b) Explain positioning techniques and constraints in the interactive graphics. **5**
- 18.** Write a note on : **(5+5)**
(a) Back-face technique for hidden line removal
(b) RGB model
- 19.** (a) Explain 3D rotation in detail. **5**
(b) Write short notes on Bezier Curves. **5**
- 20.** (a) What are the different logical classification of input devices ? **5**
(b) Explain Text Clipping with example. **5**