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**BCA 404**



**IV Semester B.C.A. Degree Examination, September 2022  
(Old Syllabus)**

**COMPUTER GRAPHICS AND MULTIMEDIA**

Time : 3 Hours

Max. Marks : 60

**Note:** *Single answer book containing 40 pages will be issued. No additional sheets will be issued.*

**Instructions :** *Answer all the questions from Part – A and any five full questions from Part – B.*

**PART – A**

1. a) What is Vector ? (10×1=10)  
b) What is the equation of straight line in standard format ?  
c) The standard form of equation for ellipse is \_\_\_\_\_  
d) What is meant by dithering ?  
e) PHIGS stands for \_\_\_\_\_  
f) What is Quantization ?  
g) What is Shearing ?  
h) Define sampling rate.  
i) What is ADC ?  
j) Give any one advantage of CD-DA.

**PART – B**

2. a) Explain the architecture of Raster scan display.  
b) Compare vector scan display and raster scan display. (6+4)
3. a) Explain Mid-point algorithm for scan converting circles.  
b) What is meant by 8-way symmetry of a circle ? (7+3)
4. a) Explain briefly about Cohen-Sutherland clipping algorithm.  
b) Write short note on :  
i) Pattern filling  
ii) Replicating pixel. (6+4)

P.T.O.



- 5. a) Show that successive 2D translations are additive and scaling is multiplicative.  
b) Explain how can you rotate a 2D object about an angle. **(5+5)**
  
  - 6. a) Differentiate perspective projection and parallel projection.  
b) Give 3D scaling transformation of a point 'P' relative to the co-ordinate origin. Also obtain scaling with respect to a selected fixed position. **(5+5)**
  
  - 7. a) Explain the properties of Multimedia System.  
b) Write note on :
    - i) Channel messages.
    - ii) System messages. **(5+5)**
  
  - 8. a) Explain two different types of MIDI messages.  
b) Explain two types of image formats. **(5+5)**
  
  - 9. a) Write a note on WORM.  
b) Explain the limitations of CD-Rom Technology. **(5+5)**
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