2020/TDC/ODD/SEM/
BCAC–502/184

TDC Odd Semester Exam., 2020
held in July, 2021

COMPUTER APPLICATION

(Honours)

(5th Semester)

Course No. : BCAC–502

(Computer Graphics)

Full Marks : 35
Pass Marks : 12

Time : 2 hours

The figures in the margin indicate full marks for the questions

Answer **five** questions, selecting **one** from each Unit

UNIT—I

1. *(a)* Define the following : 1×3=3
(i) Resolution
(ii) VGA
(iii) RGB color

(b) Explain raster scan display. 4

2. *(a)* Explain CMY color model. 3

(b) A screen has resolution of 800×600 and follows interlaced raster technique. Calculate the time if vertical and horizontal retrace time is 1 sec each. 4

UNIT—II

3. *(a)* What is scan conversion? What are the different types of scan conversion in computer graphics? 3

(b) Write the boundary-fill algorithm and explain 4-way adjacency. 4

4. *(a)* Write the Bresenham's circle algorithm. 4

(b) How are different geometric shapes generated using a cone? Draw the diagrams. 3

UNIT—III

5. Discuss the basic 2-D transformations with example. 7

6. *(a)* Compare Cartesian coordinate system with polar coordinate system. 3

(b) Explain clipping. 4

UNIT—IV

7. *(a)* Discuss 3-D rotation. 4

(b) Draw the 3-D viewing pipeline. 3

8. *(a)* Compare quadtree with octree. 3

(b) Explain the surface rendering techniques. 4

UNIT—V

9. Write short notes on the following : 3½×2=7

(a) 3-D film

(b) 3-D animation

10. What is morphing? Why is it used? Explain the steps of morphing. 7

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