



24800006

QP CODE: 24800006

Reg No : .....

Name : .....

**MCA DEGREE EXAMINATIONS, DECEMBER 2023**

**Third Semester**

Master of Computer Application

**Elective - MCA303ET3 - COMPUTER GRAPHICS AND MULTIMEDIA**

2020 Admission Onwards

3749F7DC

Time: 3 Hours

Maximum: 75 Marks

**Part A**

*Answer any **ten** questions*

*Each question carries **3** marks*

1. Explain Calligraphic display.
2. Explain Shadow mask method.
3. Explain nonemissive display with example.
4. Explain Rotation transformation.
5. Explain reflection of an object with respect to the line  $y=x$ .
6. Explain the need for homogeneous coordinates for transformations.
7. Explain cavalier and cabinet projections.
8. Differentiate diffuse reflection and specular reflection.
9. How does the text compression work ?
10. Describe color models.
11. What is the outcome of rendering ?
12. What is the difference between channel messages and system messages in MIDI?

(10×3=30 marks)





## Part B

Answer **all** questions

Each question carries **9** marks

13. a) Discuss Random Scan Display and Raster Scan Display

OR

b) Explain the working of Thin film electroluminescent displays.

14. a) What is Bresenham's line drawing algorithm? Rasterize the line from (10,5) to (15,9) using it.

OR

b) Explain basic 2D transformations in detail.

15. a) What is filling? Write anyone filling algorithm

OR

b) Generate the transformation matrix for parallel projection on to the (X<sub>v</sub>, Y<sub>v</sub>) plane with diagram

16. a) Explain the characteristics of Multimedia presentation.

OR

b) What are image types? Describe the steps involved in image processing.

17. a) What are the stages in computer based animation process. How does the conventional animation be used as an input to computer based animation

OR

b) What are the channel messages and system messages in MIDI? Explain.

(5×9=45 marks)

