

**S.D.E.**

**M.C.A. Sem - V : WINTER - 2018**

**SUBJECT : ELECTIVE – III: COMPUTER GRAPHICS & MULTIMEDIA**

Day : Friday  
Date : 30/11/2018

Time : 10.00 AM TO 1.00 PM  
Max. Marks : 80

**W-2018-4819**

**N.B.:**

- 1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section – II.
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

**SECTION – I**

- Q.1** Explain picture representation in detail. **[10]**
- Q.2** Explain the display file structure. How does display processor work? **[10]**
- Q.3** Describe Seed fill and Edge fill methods of polygon filling in detail. **[10]**
- Q.4** Explain rotation about an arbitrary point. **[10]**
- Q.5** Discuss inverse transforms and their applications with matrix. **[10]**
- Q.6** Describe the procedure to generate Bezier curve. **[10]**
- Q.7** Write notes on **ANY TWO** of the following: **[10]**
- a) Raster Technique
  - b) Ray Tracing
  - c) Diffuse Illumination

**SECTION – II**

- Q.8** Explain DDA algorithm for circle generation. **[15]**
- Q.9** Implement Bresenham's line algorithm to draw line from (0, 0) to (6, 6). **[15]**  
Explain vector generation of line.
- Q.10** What is 3D transformation? Write a matrix of each transformation. Also **[15]**  
explain mirror reflection.

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