Total No. of Questions—**8**] [Total No. of Printed Pages—**2**

Seat No.	

[5352]-567

S.E. (Computer Engineering) (II Sem.) EXAMINATION, 2018

COMPUTER GRAPHICS

(2015 PATTERN)

Time : Two Hours **Maximum Marks : 50**

N.B. :— (*i*) Answer total *four* questions. Q. No. **1** *or* Q. No. **2**, Q. No. **3** *or* Q. No. **4**, Q. No. **5** *or* Q. No. **6**, Q. No. **7** *or* Q. No. **8**.

(*ii*) Neat diagrams must be drawn wherever necessary.

(*iii*) Figures to the right indicate full marks.

Q1 a) Explain display file structure with any 2 primitive operations [4]
b) Explain polygon fill with seed fill algorithm [4]
c) Scan convert a line with end points (10,5) & (16,10) using DDA line drawing algorithm [4]

OR

Q2 a) what is polygon filling? Explain in detail scan line polygon filling algorithm? [6]
b) Write and explain Bresenham's circle drawing algorithm with related mathematics. [6]

Q3 a) Explain briefly rotation about an arbitrary axis in 3D. [6]
b) Write short note on.
i. Morphing ii. Design of animation sequence iii. CIE chromaticity diagram [6]

OR

Q4 a) Explain following terms with examples [6]
i] Properties of light ii] Keyframes iii] HSV color model
b) Explain perspective projection and its types in brief. [3]
c) Rotate origin centered square with 2 unit length of each side, in clockwise direction with rotation angle of 90^0. [3]

Q5 a) Enlist and explain in detail any 2 shading algorithms. [7]
b) How Warnock and painter algorithm are useful in hidden surface removal? Explain with their advantages. [6]

OR

Q6 a) Write short note on phong and Gauraud model. [7]
b) Write short note (any two) [6]
i] Z-buffer ii] Back face detection and removal algorithm iii]BSP tree

P.T.O.

Q7 a) What is fractal? Explain Koch(Triadic) curve in detail [4]
b) Write short note on blending function of Bezier curve [4]
c) What is openGL? Write four features of the same? Write any two 3D transformation Function of openGL [5]

OR

Q8 a) Draw block diagram of NVIDIA workstation and explain it in brief. [5]
b) Explain Hilbert curve and its application in detail. [4]
c) Write short note on B-spline curve [4]