

Roll No: .....

Total No. of Questions : 09]

[Total No. of Pages :02

## Paper ID [CS309]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem. - 5<sup>th</sup>)

COMPUTER GRAPHICS (CS - 309)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

### Section - A

Q1)

(10 × 2 = 20)

- a) What is aspect ratio?
- b) Define scan conversion.
- c) What is clipping?
- d) Define rendering?
- e) What is antialiasing?
- f) List two important characteristics of homogeneous coordinates?
- g) List two important properties of raster devices.
- h) What is scaling?
- i) Define geometric transformations.
- j) What are windowing transformations?

**Section - B**

**(4 × 5 = 20)**

- Q2)** Explain the operating characteristics of plasma panels.
- Q3)** What is rotation? Explain two dimensional rotation in brief.
- Q4)** Differentiate between gourad and phong shading in brief.
- Q5)** Explain the steps involved in z-buffer algorithm with example.
- Q6)** Explain the working principle of mouse.

**Section - C**

**(2 × 10 = 20)**

- Q7)** What is a Bezier curve? Discuss its properties. Explain the Bezier surfaces in brief.
- Q8)** Show that two successive reflections about either of the coordinate axes is equivalent to a single rotation about the coordinate origin.
- Q9)** Write short notes on the following:
- a) Floating horizon.
  - b) Vanishing points.

