

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. - 5th)

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?

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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:
- Floating horizon.
 - Vanishing points.

