

Roll No. ....

Total No. of Questions : 09]

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**B. Tech. (Sem. - 5<sup>th</sup>)**  
**COMPUTER GRAPHICS**  
**SUBJECT CODE : CS - 309**  
**Paper ID : [A0468]**

[Note : Please fill subject code and paper ID on OMR]

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 scan conversion?
- b) List the different types of clippings.
- c) What do you understand by the term surface rendering?
- d) What is Z-Buffer?
- e) Define the term rendering?
- f) What is translation of an object?
- g) What is a perspective view?
- h) Define the term rotation in three dimensions.
- i) Define the various I/O devices.
- j) What do you mean by fractals?

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Section - B

(4 × 5 = 20)

- Q2) List all the applications of computer graphics.
- Q3) Describe in detail Bresenham's line drawing algorithm.
- Q4) Define the term object precision. How it is different from image precision?
- Q5) What are windowing and clipping? Explain Sutherland-Hodgman algorithms for clipping a polygon.
- Q6) What are projections? Explain different types of projections.

Section - C

(2 × 10 = 20)

- Q7) Explain the scan line method for visible surface detection.
- Q8) Explain in detail any of the two Bezier and B-Spline curves.
- Q9) What do you mean by raster scan systems? Explain the working of a color CRT monitors.

