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Total No. of Questions: 09

Total No. of Pages: 02

B. Tech. (CSE) (Sem. 5)
COMPUTER GRAPHICS
Subject Code: BTCS-504
Paper ID: A2100

Time: 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

1. Section A is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. Section B contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. Section C contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION A

1.
 - a) What is pixel?
 - b) Explain Random Scan System?
 - c) What are homogeneous coordinates?
 - d) What is shear transformation?
 - e) Write a short note on working of raster scan display systems?
 - f) Discuss vanishing points?
 - g) Write about windows and view port?
 - h) What is text clipping?
 - i) Discuss Ellipse generating algorithms?
 - j) Write a short note on Phong Shading?

SECTION B

2. Explain Bresenham's line drawing algorithms?
3. Write various area filling techniques? Explain any one in detail?
4. What are different types of plane projections? Explain with example?
5. What are the benefits of Z buffer algorithms?
6. Derive transformation matrix for 2-D viewing transformation?

SECTION C

7. Give the syntax of drawing a circle in computer graphics using various algorithms?
8. Discuss surface removal or surface determination techniques?
9. Define following with example
 - a) Ray tracing
 - b) Fractals