

Roll No.

Total No. of Questions : 07]

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BCA (Sem. - 5th)
COMPUTER GRAPHICS
SUBJECT CODE : BC-503

Paper ID : [B0221]

[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.

Section - A

(10 × 2 = 20)

Q1)

- a) What is touch panel and graphic tablet?
- b) Explain the difference between flatbed and drum plotters.
- c) What is random scan? How it is different from raster scan?
- d) Define circle and ellipse.
- e) What do you understand by resolution of a monitor?
- f) Why is Bresenham's algorithm better than DDA?
- g) What is character generation?
- h) What are homogeneous coordinates? Explain their use.
- i) Define shearing and skewness.
- j) What is CRT? Explain its components with neat and clean diagram.

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Section - B**(4 × 10 = 40)**

- Q2)** What do you understand by Computer Graphics? What are its applications?
- Q3)** Explain the use and benefits of monitor displays. Which are two major monitor types? Explain briefly.
- Q4)** (a) What is transformation? Explain various types of transformation?
(b) Perform a 45 degree rotation of a triangle A(0, 0), B(1, 1), C(5, 2)
(i) About the origin
(ii) About point P(-1, -1)
- Q5)** What is line? Give its attributes? Write an algorithm for line drawing.
- Q6)** What is projection? Explain the difference between parallel and perspective projection.
- Q7)** (a) What is clipping? Explain.
(b) What is difference between 2D and 3D graphics? Explain.

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