

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

B.Tech-V Semester (CSE)

COURSE CODE (CREDITS): 18B11CI515 (3)

MAX. MARKS: 15

COURSE NAME: Computer Graphics

COURSE INSTRUCTORS: ATA SMA PTK and AYS

MAX. TIME: 1 Hour

Note: All questions are compulsory.

Q.No	Question	CO	Marks								
Q1	Write the Mid-Point Ellipse Algorithm for Region 2 only, and compute step-by-step the pixel coordinates for an ellipse with $r_x=6, r_y=4$. Obtain all points for Region-1 , showing each iteration (x, y), Initial decision parameter and updated parameter.	2	(1+3)								
Q2	Write down various steps of Bresenham's line drawing algorithm for slope less than 1. Apply this algorithm steps to indicate which raster locations would be chosen by the Bresenham's algorithm when scan converting a line from pixel coordinate position (1, 1) to (8, 5).	2	(1+3)								
Q3.	1) Two polarizing filters are placed at 90° to each other (crossed polarizers). Normally, no light passes. But an LCD panel is inserted between them. Why does light become visible again? 2) Match the Following: <table><tr><td>CRT</td><td>Static radar/weather images</td></tr><tr><td>LCD</td><td>Large-screen TV with vivid colors</td></tr><tr><td>Plasma Display</td><td>Old oscilloscopes & early monitors</td></tr><tr><td>Storage Tube</td><td>Energy-efficient mobile devices</td></tr></table>	CRT	Static radar/weather images	LCD	Large-screen TV with vivid colors	Plasma Display	Old oscilloscopes & early monitors	Storage Tube	Energy-efficient mobile devices	1	(1.5+1.5)
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Q4.	Determine the content of active edge table to fill the polygon with vertices A(2, 4) B(2,7) C(4,9) and D(4,6) using Scan Line Filling Algorithm.	2	(4)								

ALL THE BEST