

Student Registration Number

B

COURSE CODE: DCAP 504

COURSE TITLE: COMPUTER GRAPHICS

Time Allowed: 3 hours

Max. Marks: 80

1. This paper contains 10 questions divided in two parts on 1 page.

2. Part A is compulsory.

3. In Part B (Questions 2 to 10), attempt any 6 questions out of 9. Attempt all parts of the selected question.

4. The marks assigned to each question are shown at the end of each question in square brackets.

5. Answer all questions in serial order.

6. The student is required to attempt the question paper in English medium only.

### PART A

Q1

- (a) What is an image processing? [2]
- (b) What is the use of Colour look up table? [2]
- (c) Define resolution of a monitor. [2]
- (d) Define aliasing. [2]
- (e) Write equation for scaling transformations. [2]
- (f) Define Zooming. [2]
- (g) Write name of any two line clipping algorithms. [2]
- (h) Explain any one projection. [2]
- (i) Name any four hidden surface algorithm. [2]
- (j) What is morphing? [2]

### PART B

Q2 Write bresenham's line drawing algorithm and explain it. [10]

Q3 Write the difference between raster scan and random scan display. [10]

Q4 Write Cohen Sutherland line clipping algorithm and explain it with help of an example. [10]

Q5 Write and explain scan line hidden surface removal algorithm. [10]

Q6 Write a note on different types of modern printers. [10]

Q7 Apply the following transformations.

- (i) A Point is located at location (3, 5) apply transformation to locate it to new location of (7, 6).
- (ii) A Coordinates of Point are (5, 5) find the new coordinates when you rotate it to 45 degree to counter clockwise direction. [5+5=10]

Q8 Explain different shading models. [10]

Q9 Write note on following terms:

- (i) Animation
- (ii) Output Devices [5+5=10]

Q10 Explain functioning of CRT with help of diagram. [10]