Student Regd. No.

B

Course Code: DCAP504 Course Title: Computer Graphics

Date of Exam:- 18 Sept **Session:- 9:30-12:30**
Time Allowed : 3 hours **Max. Marks: 80**

1. ***This paper contains 10 questions divided in two parts on 2 pages.***
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 questions chosen.***
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.***

PART- A

Q1: Explain in brief:

i. What is digital image processing?
ii. Define resolution in terms of Computer Graphics.
iii. Name any 2 circle drawing scan conversion methods.
iv. What do you mean by scaling effect in 2-D transformations?
v. What is panning?
vi. Name any 2 line clipping methods.
vii. What are various perspective projection anomalies?
viii. Why hidden surface detection is important in computer graphics?
ix. What do you mean by Ray tracing?
x. What is image morphing?

[10X2=20]

PART- B

Q2: List and explain various Input and Output devices. **[10]**

Q3: Differentiate between Random Scan and Raster Scan Displays. **[10]**

Q4: Explain various 2-D transformations with examples. **[10]**

Q5: How will you perform Window to Viewport mapping? **[10]**

Q6: Write and explain DDA line drawing algorithm. **[10]**

Q7: Suppose we want to perform line clipping using Cohen Sutherland Method. What are the various steps involved in clipping? **[10]**

Q8: Take an example polygon and explain how one can perform clipping using **Sutherland-Hodgeman Algorithm.** **[10]**

Q9: What do you mean by hidden surface detection? Explain various hidden surface detection methods. **[10]**

Q10: Explain various shading models in details. **[10]**