



Computer Graphics (174115)

P. Pages : 2

Time : Three Hours

Max. Marks : 80

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Answer **any two** subquestion's from each unit.
5. Figures to right indicate full marks.
6. Assume suitable data, if necessary.

UNIT - I

1. a) List and explain various character generation method's in brief. 8
b) Explain DOA line drawing algorithm with suitable example. 8
c) Explain concept of color video Monitors, which define beam penetration and shadow mask technique. 8

UNIT - II

2. a) What are the polygon filling techniques ? Explain any one of them. 8
b) List various scan conversion techniques ? Explain run length encoding and cell encoding in detail. 8
c) What is segment table ? Write algorithm for create segment and delete segment. 8

UNIT - III

3. a) Derive Matrix for rotation about an arbitrary point. Perform a counterclockwise 45° rotation of triangle A (2,3), B(5,5), C(4,3) about point (1,1). 8
b) Explain in brief concept of 3D transformation with an example. 8

- c) What is projection ? Explain parallel and perspective projection in brief. 8

UNIT - IV

4. a) Explain midpoint subdivision algorithm in brief. 8
- b) What is line clipping concept ? Explain Sutherland cohen line clipping algorithm with proper diagram. 8
- c) Write short note on 8
- i) Painter Algorithm
- ii) Z Buffer Algorithm.

UNIT - V

5. a) Explain graphics standards in detail. 8
- b) List color models and explain RGB and CMY models in brief. 8
- c) Write short note on 8
- i) Bezier Curve
- ii) B Spline and corner.
