

M.C.A.-II (CBCS Pattern) Sem IV
PSMCAT404.1-Elective-I-Paper-IV : Computer Graphics

P. Pages : 2

Time : Three Hours



GUG/S/18/20134

Max. Marks : 80

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- Notes :
1. All questions are compulsory and carry equal marks.
 2. Draw neat and labelled diagrams and use supporting data wherever necessary.
 3. Avoid vague answers and write specific answers related to questions.

1. Either :

- a) Define Computer Graphics and write applications of computer graphics in details. **8**
- b) What is co-ordinate system? Explain character generation with an example. **8**

OR

- c) What is vector Generation and explain vector generation algorithm. **8**
- d) What is DDA line drawing algorithm explain with an example having co-ordinates start point (0, 0) and end point (4, 5) and write its drawbacks. **8**

2. Either :

- a) Explain Input device handling algorithm in details and Event handling. **8**
- b) Define Clipping. Explain viewing transformation in detail. **8**

OR

- c) Explain Cohen - Sutherland line clipping algorithm in details. **8**
- d) Explain any two input devices in detail. **8**

3. Either :

- a) Explain 3 D - viewing transformation in details with algorithm. **8**
- b) Explain rotation about an arbitrary axis in details. **8**

OR

- c) Explain painters algorithm in detail. **8**
- d) Explain parallel projection in details. **8**

4. Either :

- a) Explain transparency concept in terms of absorption of light by an object and refraction. **8**
- b) Explain B-splines curves in details in terms of Interpolation. **8**

OR

- c) Explain curve generation and explain blending functions in details. **8**
- d) Explain point source Illumination and specular Reflection in details. **8**

5. Solve all the questions.

- a) Write short note on Graphics Primitives. **4**
- b) Write short note on : **4**
Sutherland Hodgeman polygon clipping procedure.
- c) Write the metrics for scaling. **4**
- d) Write short note on : Ray Tracing. **4**
