Master of Computer Application (MCA)-II (CBCS Pattern) Fourth Semester CBCS
PSMCAT404.1-Elective-I-Paper - IV : Computer Graphics

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Notes : 1.   All the questions are compulsory and carry equal marks.
         2.   Draw neat and labelled diagram wherever necessary.
         3.   Avoid vague answer.

1.   Either

a)   Derive the midpoint of the line segment.   **8**

b)   Write and explain fill-polygon algorithm.   **8**

OR

c)   Prove that it two lines are perpendicular, the slope of one will be the negative reciprocal of   **8**
     the slope of the other.

d)   Explain in detail SIN and COS transformation.   **8**

2.   Either

a)   Explain in detail the concept of viewing Transformation.   **8**

b)   Write and explain SAVE-CLIPPED-POINT algorithm.   **8**

OR

c)   Explain generalized clipping with position relative to an arbitrary line.   **8**

d)   Explain various hard ware devices in detail.   **8**

3.   Either

a)   Discuss in detail about rotation about an arbitrary axis.   **8**

b)   What is 3D viewing Transformation? Explain.   **8**

OR

c)   Explain in detail viewing parameters.   **8**

d)   Write and explain pointer algorithm.   **8**

4.   Either

a)   Explain in detail specular reflection.   **8**

b)   Write and explain curve generation algorithm.   **8**

OR

c) Discuss in detail point source illustration. **8**

d) Explain in detail about interpolating polygon. **8**

5. Attempt all the questions.

a) Draw the polygon using POLYGON – ABS – 2 **4**
(AX, AY,N) command.
N = 8
AX = 5 5 3 3 5 5 1 1
AY = 1 2 2 3 3 4 4 1

b) Write a short note on multiple windowing. **4**

c) Explain, how to check hidden surface? **4**

d) Explain in brief curves. **4**

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