Master of Computer Application (MCA)-II Fourth Semester OLD
# MCA244 - Computer Graphics Paper - IV

P. Pages : 2

Time : Three Hours

|| *1635* ||

Max. Marks : 80

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

**1.**      Either

a)   Explain the following .                                                                                    **8**

   i)   Frame Buffers.

   ii)   Character Generation.

   iii)   Vectors

   iv)   Polygon

b)   Write an algorithm for vector generation.                                              **8**

## OR

c)   Explain the representation of polygon and how the polygons are filled.   **8**

d)   Explain the following with algorithm.                                                       **8**

   i)   Segment creation.

   ii)   Closing the segment.

**2.**      Either

a)   Explain the following in detail.                                                               **8**

   i)   Scaling transformation.

   ii)   Rational transformation.

b)   Explain clipping & clipping of polygons in detail.                                 **8**

## OR

c)   Explain the Event Handling & Input Device Handling algorithm.             **8**

d)   Explain the following.                                                                              **8**

   i)   A Locator with a pick.

   ii)   Pick with a Locator.

**3.** Either

a) Explain the following. **8**

    i)   Parallel projection.

    ii)  Perspective projection.

b) Explain the concept position relative to an arbitrary line. **8**

<div align="center"><strong>OR</strong></div>

c) Explain the following. **8**

    i)   Back face Removal.

    ii)  Special projections.

d) Explain the Painter algorithm & Hidden surface check in detail. **8**

**4.** Either

a) Explain the concepts of diffusion & illustration with example. **8**

b) Explain the following. **8**

    i)   Transparency.

    ii)  Shadows.

<div align="center"><strong>OR</strong></div>

c) Explain the following. **8**

    i)   B- Splines.

    ii)  Fractals curves.

d) Define curves. Explain in detail about curve generation. **8**

**5.** Solve all the questions.

    a)  Explain the following Raster Display System. **4**

    b)  Explain in detail about Homogenous co-ordinate. **4**

    c)  Explain in detail about Echoing. **4**

    d)  Explain the shading and different types of shading. **4**

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