END TERM EXAMINATION

FOURTH SEMESTER [B.Tech] MAY-JUNE 2016

Paper Code: ETCS-210   Subject: **Computer Graphics**

Time: 3 Hours   Maximum Marks: 75

Note: Attempt all questions as directed. Internal choice is indicated.

Q1 Answer the following questions: **(10x2.5=25)**
(a) Define refresh buffer/frame buffer.
(b) What is pixel?
(c) Digitize a line from (10, 12) to (15, 15) on a raster screen using Bresenhams straight line algorithm.
(d) Define view port.
(e) What are Parametric curves?
(f) Define Clipping.
(g) What is Output Primitive?
(h) What is meant by antialising?
(i) Define Translation.
(j) Differentiate parallel projection from perspective projection.

Unit-I

Q2 (a) Explain DDA line drawing algorithm with Example.   **(10)**
(b) What do you mean by scaling? Give example.   **(2.5)**

OR

Q3 Write about Cohen-Sutherland line clipping algorithm with an example. **(12.5)**

Unit-II

Q4 Write down and explain the Bresenham's circle drawing algorithm. Assume 10 cm as the radius and co-ordinate as the centre of.   **(12.5)**

OR

Q5 (a) Write short notes on Bezier Curves.   **(5)**
(b) Derive the Bezier metric.   **(5)**
(c) Write down the condition for smoothly joining curve segments.   **(2.5)**

Unit-III

Q6 (a) Write down the process of drawing **Oblique Projection on xy plane**. Explain with the help of an example.   **(10)**
(b) What are isometric projections?   **(2.5)**

OR

Q7 (a) How to generate projection from One Vanishing Point Method?   **(6)**
(b) Describe the concept of Solid Modelling.   **(6.5)**

Unit-IV

Q8 Write short notes on **any two** of the following: **(6.25x2=12.5)**
(a) Area Subdivision Method
(b) Z-Buffer Method
(c) Specular Reflection Model

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