QP Code : 5526

(3 Hours)

[Total Marks : 60

N. B (1) Question No. 1 is compulsory.
(2) Solve any three questions from the remaining
(3) Assume suitable data wherever necessary.

1. (a) State what is meant by clipping. Explain any one clipping algorithm 05
   (b) Explain flood fill algorithm in detail 05
   (c) Differentiate between random scan and raster scan technique 05
   (d) Explain the various color models in detail 05

2. (a) Define window and viewport. Derive window to viewport transformation 10
   (b) Explain what is meant by Bezier curve. Also explain how a Bezier surface 10
   can be generated from Bezier curve

3. (a) What is meant by parallel and perspective projections? Derive the matrix 10
   for perspective projections
   (b) Explain the steps used in rotation of 2 D object about an arbitrary axis and 10
   hence derive the matrix for the same

4. (a) Explain midpoint circle algorithm. Explain the same to plot a circle whose 10
   radius is 10 units
   (b) Explain half toning and dithering techniques in detail 10

5. (a) Derive Bressenhams line drawing algorithm for lines with slope < 1 10
   (b) Explain Gourand and Phong shading techniques in detail 10

6. Write short notes on:- (any two) 20
   (a) Polygon clipping method.
   (b) OpenGL
   (c) Sweep representations

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Course: S.E. (SEM-IV) (REV-2012) (CBSGS) (COMPUTER ENGG) (PROG- T1124)

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Correction:

Please do the following corrections in the SE / COMP / IV-SEM / NOV-2015 Paper

SUBJECT CODE: 5526

Subject: Computer Graphics

Printed as Total Marks: 60
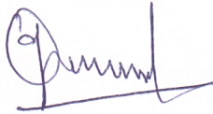
Change it as Total Marks: 80

Query Update time: 22/12/2015   03:10 PM

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Block no-10 _   (J.S.)