**AKGEC/IAP/FM/02**

**AjayKumarGargEngineeringCollege, Ghaziabad**

**Department of Mechanical Engineering**

**SessionalTest-2**

Course: B.Tech Semester: VI

Session: 2017-18 Section: ME-1,2, 3

Subject: Computer Aided Design Sub. Code: NME-701

Max Marks:50 Time: 2 hours

***Note*** : Answer**all**the Sections.

**Section-A**

1. Attempt **all**the parts. **5 X 2 = 10**
   1. Difference btw DDA and bresenhem line drawing algo.
   2. Define homogeneous coordinate system.
   3. Explain graphics standards.
   4. Define approximation and interpolation in curve design.
   5. Write properties of Bezier curve.

**Section-B**

**2.** Attempt **all**the parts. **5X 5 = 25**

1. Find raster locations by Bresenham line drawing algo for line segment with end points (3,2) and (8,6).
2. Derive mid point circle algo.
3. Find transformed coordinates of a plane triangular lamina having the vertices (5,2) , (3,1) and (2,2) rotated by 90 degree about the point (5,2) in counter clockwise direction.
4. Using scaling magnify the triangle with vertices (0,0) (2,2) and (7,3)to 4 times its size in both directions keeping (7,3) fixed.
5. Reflect triangle (0,0) (3,2) and (7,8) about line y=3x+7 and write its new coordinates.

**Section-C**

**3.** Attempt **all**the parts. **2 X 7.5 =15**

1. Draw Bezier curve with following control points ((2,3), (4,5), (7,-7) and (11,7) and find 4 points on curve besides the one mentioned
2. Derive hermite matrix.