



ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
School of Engineering & Technology

DEPARTMENT OF MECHANICAL ENGINEERING

CLASS:- BE (ME-I & II)

SEM:- VII

SUBJECT:- CAD/CAM/CAE

DATE:- 17 / 09 / 2016

DURATION:- 60 min.

MARKS:- 20

CLASS TEST 01

Q.01 Attempt any two: (08 Marks)

- Write Cohen-Sutherland Algorithm for line clipping. 04
- Find the general transformation matrix N for window to viewport mapping. 04
- Determine the pixels or points on circumference of the circle passing through two points (P_1 and P_2) defining its diameter. Calculate the points for quarter circle with the increment between each point is 30° , if $P_1 (10, 20)$ and $P_2 (25, 50)$. 04

Q.02 Attempt any two: (12 Marks)

- Find the equation of Bezier curve which is defined by four points as: $P_0=(2,2,0)$, $P_1=(2,3,0)$, $P_2=(3,3,0)$, $P_3=(3,2,0)$. And also find the points on the curve for $u= 0, 0.2, 0.4, 0.6, 0.8$ and 1 . 06
- Reflect the triangle ABC about the line $3x - 4y + 8 = 0$. The position vector of the coordinate ABC is given as, $A=(4,1)$, $B=(5,2)$, $C=(4,3)$. Find the composite transformation matrix and its new coordinates. 06
- A rectangle ABCD has vertices $A(1,1)$, $B(2,1)$, $C(2,3)$, $D(1,3)$. It has to be rotated By 30° CCW(counter clock wise) about point $P(3,2)$. Determine: a) The composite transformation matrix. b) The new coordinate of rectangle. 06