Roll No.	Enrolment No.

C.U.Shah College of Engineering and Technology

Wadhwancity – 363030

B.E all semester-II Mid semester Examination March-2009

Sub:- Engineering Graphics **Max. Marks: - 40**

Date: - 26/03/09 **Time: - 2 Hrs.**

Instruction: -

(i) Attempt all the question.

(ii) Make suitable assumptions whenever necessary.

(iii) Figure to the right indicate full marks.

Q-1 (a) Construct a diagonal scale with the scale 1 cm = 0.5 KM. Showing kilometers, hectometer and decameter. Scale should be long enough to measure up to 5 KMs. Indicate on the scale the distance of 3kms 7 hm 8 dam. (5)

(b) Define ellipse. The major axis and minor axis of ellipse are 125 mm and 75 mm respectively. Construct an ellipse by arc of circle method. (10)

OR

(b) Define cycloid. Diameter of the rolling circle is 30 mm. construct the cycloid. Draw the tangent and normal at any point of curve. Initial position of point P is at the point of contact between generating circle and directing line. (10)

Q-2 (a) Enlist types of lines with illustration and applications. (5)

(b) O_1ABO_2 is a four bar chain with the link O_1O_2 as the fixed link. Driving crank O_1A is 30 mm long. Driven crank O_2B is also 30 mm long. Connecting link AB is 90 mm long. Distance between O_1 and O_2 is 90 mm. Two cranks are rotating in opposite directions. Draw the loci of point P and R for one complete revolution of the driving crank. The point P is mid point of the connection link AB and point R is 35 mm from A on BA extended. (10)

OR

(b) A link AB of 72 mm length rotates about its center in the anticlockwise directions. While the links complete one revolution the insect walks across the length from one end to the other. Plot the locus of the insect assuming the rotation of link and the motion of the insect as uniform. (10)

Q-3 A line AB 100 mm long is inclined at an angle 30^0 to HP and 45^0 to VP. Its end A is 20 mm above HP and 15 mm in front of VP. Draw the projection of line. (10)

OR

(a) Draw a parabola whose base is 80 mm and Height 50 mm by rectangle method. (5)

(b) Draw an involutes of pentagon of side 25 mm. (5)