Enroll. No. _____

SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

ADITYA SILVER OAK INSTITUTE OF TECHNOLOGY

BE - SEMESTER–II • MID SEMESTER-I EXAMINATION – SUMMER 2019

SUBJECT: ENGINEERING GRAPHICS & DESIGN (3110013) (IT/ME/CL/AE)

DATE: 13-03-2019 TIME: 12:00 pm to 01:45 pm TOTAL MARKS:40

Instructions: 1. All the questions are compulsory.
2. Figures to the right indicate full marks.
3. Assume suitable data if required.

Q.1 (a) Draw the following dimensioning methods: (1) Aligned (2) Unidirectional [03]

(b) Give illustration with applications for (1) Long Chain Thin (2) Continuous Thin (3) Short Dashed Medium [03]

(c) 3.2 cm long line represents a length of 4 metres. Extend this line to measure length up to 25 metres and show on it units of metre and 5 metres. Show length of 17 metres on the line. [04]

Q.2 (a) Draw a Hyperbola having eccentricity 8:5, the vertex V of which is at a distance of 25mm from the directrix AB. Find at least 8 points to draw the curve. Find the distance of the focus F from the directrix. Also draw a normal and a tangent to the curve at a distance 52mm from the focus. [06]

(b) The front view of line AB, 90 mm long, measures 65 mm. Elevation is inclined at 45° to XY line. Point A is 20 mm below HP and on VP. Point B is in third quadrant. Draw the projections and find its inclinations with HP and VP. [05]

(c) Give Applications of Following Curves.(1)Ellipse (2) Hyperbola (3) Parabola (4)Archimedean Spiral [04]

OR

Q.2 (a) The foci of an Ellipse are 110 mm apart. The minor axis is 70 mm long. Determine the length of the major axis and draw ellipse by rectangle method. [06]

(b) A line PQ, 65 mm long, is inclined to H.P. by 30º and inclined to V.P. by 45º. The end P is 20 mm below H.P. and 25 mm behind V.P. Point Q is in fourth quadrant. Draw its projections and find the position of the point Q. [05]

(c) Explain the difference between the first angle projection and the third angle projection. [04]

Q.3 (a) Draw Elevation (FV), Plan (TV) of the object given in figure 1 using First Angle projection method. [06]

(b) A line AB, 80 mm long is inclined at 45° to HP and 30° to VP. Its midpoint C is in VP and 15 mm above HP. End A is in third quadrant and B is in first quadrant. Draw the Projections of Line. [05]

(c) Draw the Projections of points on the same XY line keeping 15 mm distance between end projectors, positions of which are given below: [04]

(1) Point A 25 mm above HP and 1 0 mm in front of VP
(2) Point B 20 mm below HP and 15 mm behind VP
(3) Point C 35 mm above HP and on VP
(4) Point D on HP and 15 mm in front of VP

OR

Q.3 (a) Draw in third angle projection system (i) FV (ii) LHSV for object shown in fig. 2. [06]

(b) Point P of a straight line PQ is 25mm above HP and point Q is 65mm in front of VP. The line makes an angle of 30° with HP and its plan is at 45° to XY line. Draw the projections of line if the plan length is 70 mm. Also find the true length of line and the angle made by the line with VP. [05]

(c) Draw projections of the following lines. [04]

(1) Line MN 50mm is in 1st quadrant and parallel to both hp & vp.

(2) Line PQ 35mm is in 3rd quadrant and remains perpendicular to VP and parallel to HP.

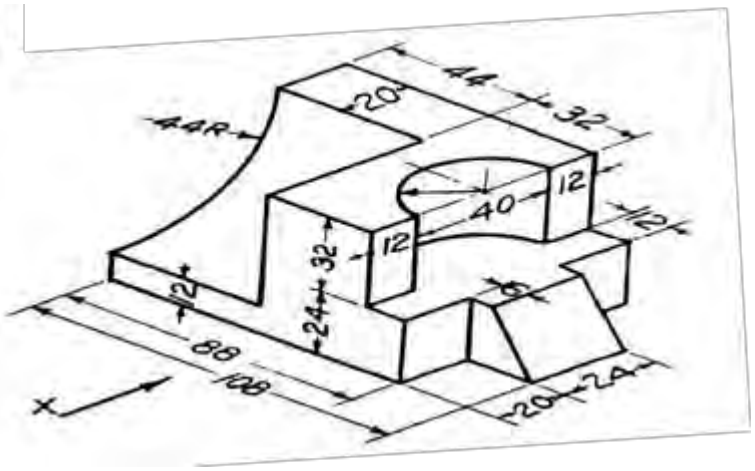

Figure 1.

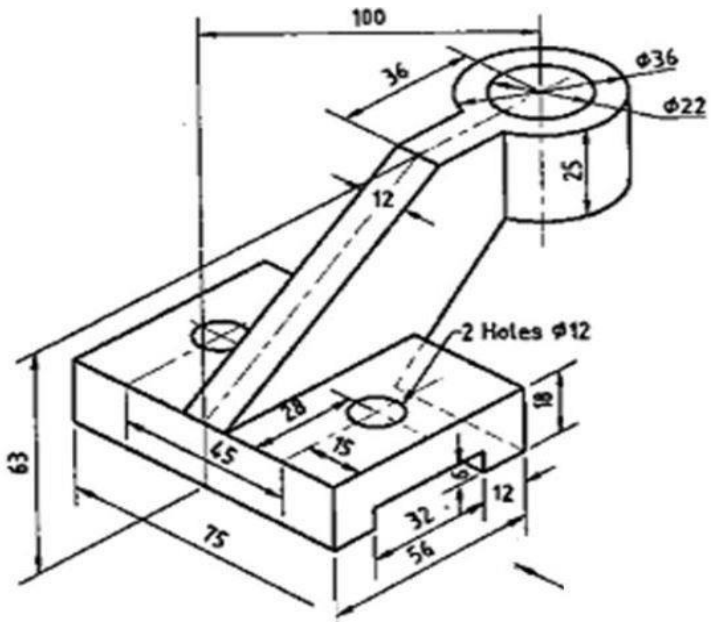

Figure 2.