Q.P. Code:18ME0302 **R18**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year I Semester Supplementary Examinations June 2019

ENGINEERING GRAPHICS & DESIGN

(ECE, CSE, CS&IT)

Time: 3 hours Max. Marks:60

(Answer all Five Units 5 X 12 = 60 Marks)

UNIT-I

1 **a.** The vertex of a hyperbola is 60 mm from its focus. Draw the curve, if the eccentricity is 3/2. Draw a normal and a tangent at a point on the curve, 75 mm from the directrix. 6M

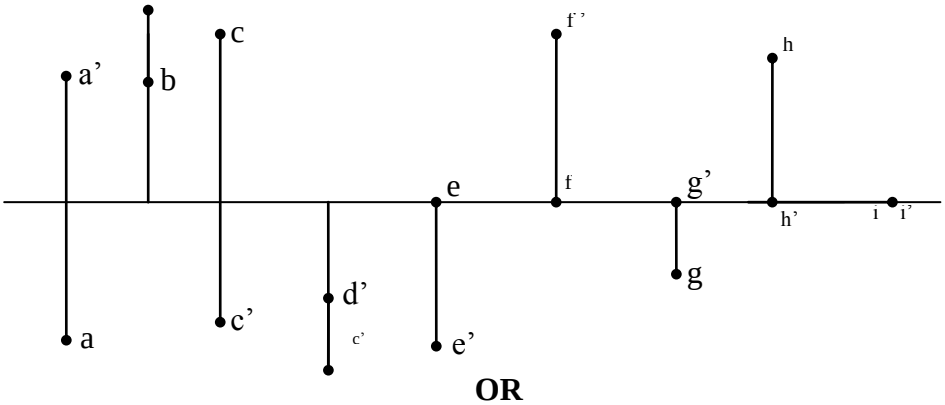
b. Construct a parabola with base 60mm and length of the axis 40mm. Draw a tangent to the curve at a point 20mm from the base. Also, locate the focus and directrix to the parabola. (Rectangle method). 6M

OR

2 A wheel of diameter 60cm rolls on a straight horizontal road. Draw the locus of a point P on the periphery of the wheel, for one revolution of the wheel, if P is initially a) on the road b) farthest from the road . 12M

UNIT-II

3 Indicate the positions of the points shown in the figure below with respect to the planes of projections**.** 12M



OR

4 **a.** A line of 80mm long, makes an angle of 35^0 with HP and 45^0 with VP. Its mid point is 15mm above HP and 10mm in front of VP. Draw the projections of the line. 6M

A line CD, 90mm long, measures 72mm in front view and 65mm in top view. 6M

b. Draw the two views of the line if it fully lies in the first quadrant. Find the true inclinations of the line. Point C lies at a distance 20mm from the reference planes.

UNIT-III

5 **a.** A square plane ABCD of side 30mm, is parallel to HP and 20mm away from it. Draw the projections of the plane, when (i) two of its sides are parallel to VP and (ii) and one of its side is inclined at 30^0 to VP.. 6M

b. Draw the projections of a circle of 5 cm diameter, having its plane vertical and inclined at 30^0 to the VP. Its center is 3 cm above the HP and 2 cm in front of the VP. 6M

OR

6 A regular hexagon of 30 mm side has a corner on the HP. The corner opposite to this corner is 25 mm above the HP. The top view of the diagonal through these corners is perpendicular to xy. Draw the projections of the plane and find its inclination with the VP. 12M

UNIT-IV

7 **a.** Draw the projections of pentagonal pyramid, base 30 mm edge and axis 70 mm long, having its base on the HP and an edge of the base parallel to VP. Also draw its side view. 6M

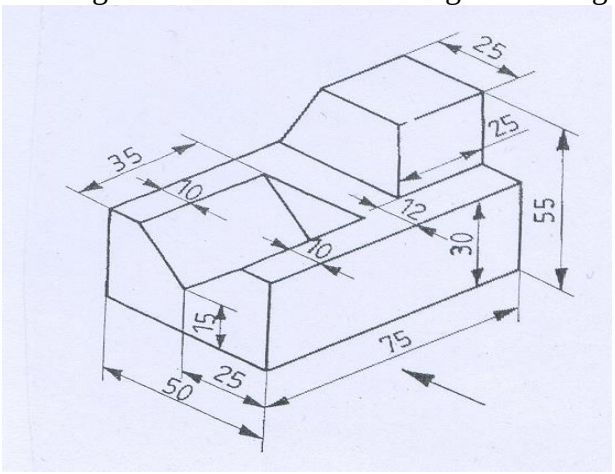
b. A cube of 50 mm long edges is resting on the HP with its vertical faces equally inclined to VP. Draw its projections. 6M

OR

8 A cube of edge 60mm stands vertically on HP such that, its vertical faces are equally inclined to VP. A section plane, perpendicular to VP and inclined to HP, cuts the solid in such a way that the true shape of the section is an equilateral triangle of 60 mm side. Draw the projections, true shape of the section and determine the inclination of the section plane with HP. 12M

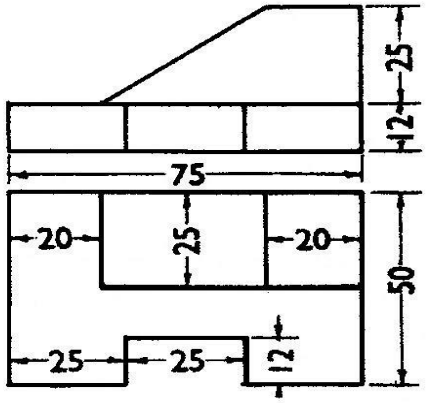
UNIT-V

9 Draw three views of the figure shown below according to first angle projection. 12M



OR

10 Draw the isometric view of the following sketch. 12M



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