R16

Reg. No. ☐☐☐☐☐☐☐☐☐☐

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year I Semester (R16) Regular & Supplementary Examinations Dec 2017
ENGINEERING GRAPHICS
(ECE)

Time: 3 hours   Max. Marks:60

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

UNIT-I

1   Draw an ellipse by concentric circles method and find the length of the minor axis with the help of the following data:
    (i) major axis = 100 mm. (ii) distance between foci 70 mm.   12M

OR

2   Draw an involute of a circle of 40 dia. Also draw a tangent and normal to the curve at a point 100 from the center of the circle.   12M

UNIT-II

3   a   A straight line AB of 40mm length is perpendicular to the HP and its end A, which is nearer to the HP, is 10mm above the HP and 15mm in front of the VP. Draw its projections.   4M

    b   A line YZ, 65 mm long, has its end Y 20 mm below HP and 25 mm behind VP. The end Z is 50 mm below HP and 65 mm behind VP. Draw the projections of line YZ and finds its inclinations with HP and VP.   8M

OR

4   FV of line AB makes 45^0 angle with XY line and measures 60 mm. Line's TV makes 30^0 with XY line. End A is 15 mm above HP and its VT is 10 mm below HP. Draw projections of line AB, determine inclinations with HP & VP and locate HT, VT.   12M

UNIT-III

5   a   A rectangular plane ABCD 25X45 inclined to H.P by an angle (θ) 30^0, its shorter edge being parallel to H.P and inclined to V.P by an angle (ϕ) 45^0. Draw its projections.   7M

    b   Draw the projections of circle of 50mm diameter, having its vertical and inclined at 30^0 to the VP. Its center is 30mm above the HP and 20mm in front of the VP show its traces.   5M

OR

6   A cube of edge 35mm is resting on H.P on one of its corners with a solid diagonal perpendicular to v.P. Draw the porjections of the cube.   12M

UNIT-IV

7   A cylinder of 40 mm diameter, 60 mm height and having its axis vertical is cut by a section plane, perpendicular to the VP, inclined at 45^0 to the HP and intersecting the axis 32 mm above the base. Draw its front view, sectional top view, sectional side view and the true shape of the section.   12M

OR

8   A cone 40mm diameter and 50 mm axis is resting on one generator on HP (lying on Hp) which is parallel to VP. Draw its projections. It is cut by a horizontal section plane through its base center. Draw sectional TV, development of the surface of the remaining part of cone.   12M

UNIT-V

9   Convert the given pictorial view into orthographic views of F.V., T.V. & R.S.V.
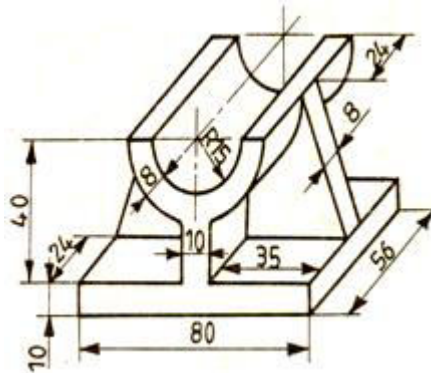
12M

OR

10   A cylinder 50mm dia. and 70mm axis is completely penetrated by another of 40 mm dia.and 70 mm axis horizontally Both axes intersect & bisect each other. Draw projections showing curves of intersections.   12M

*** END ***