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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech I Year II Semester Supplementary Examinations March-2021

ENGINEERING GRAPHICS

(Common to CE, EEE, ME and AGE)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 Draw a hypo cycloid of circle of 40 mm diameter which rolls inside another circle of 160 mm diameters for one revolution counter clock wise. Draw a tangent and a normal to each at point 65 from the centre of the directing circle. **12M**

OR

- 2 Construct a rectangular hyperbola when a point P is at distance of 18 mm and 34mm from two asymptotes. Also draw a tangent to the curve at a point 20 from an asymptote. **12M**

UNIT-II

- 3 A semi-circular plate of 80 mm diameter, has its straight edge on V.P and inclined at 30° to H.P, while the surface of the plate is inclined at 45° to V.P. Draw the projections of the plate. **12M**

OR

- 4 A Thin 300-600 set-square has its longest edge (diagonal) on H.P and inclined at 30° to V.P. Its surface makes an angle of 45° with H.P. Draw the projections, choosing suitable size for the set-square. **12M**

UNIT-III

- 5 A square prism of base side 40mm and height 80mm has its base on HP and its faces are equally inclined to VP. Its cut by a plane perpendicular to VP inclined at 60° to HP passing through a point on the axis 55 mm above the HP. Draw its SFV,SSV,STV,TS. **12M**

OR

- 6 A cone with base 60 mm diameter and axis 75 mm long, is resting on its base on H.P. It is cut by a section plane parallel to H.P and passing through the mid-point of the axis. Draw the projections of the cut solid **12M**

UNIT-IV

- 7 A cylinder of base diameter 40 mm and axis 55 mm long is resting on its base on HP. Its cut by a section plane perpendicular to VP and inclined at 45° to HP. The section plane is passing through the top end of an extreme generator of the cylinder. Draw the development of lateral surface of the cut cylinder. **12M**

OR

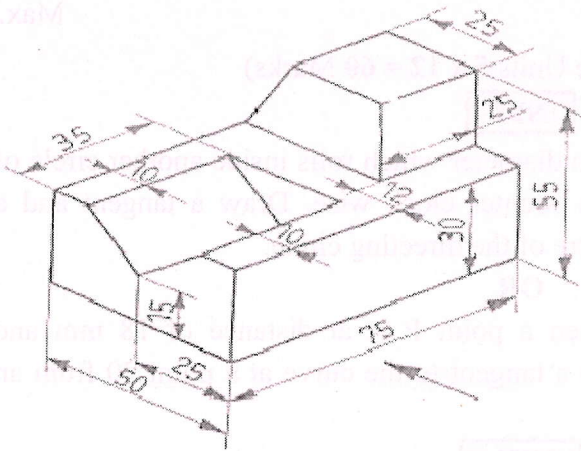
- 8 A vertical cylinder of 50 mm diameter and 70 mm axis is completely penetrated by another horizontal cylinder of 40 mm diameter and 70mm axis. Both axis intersect and bisect each other. Draw the projections showing curves of intersection **12M**

UNIT-V

9 Draw the isometric view of a pentagonal prism of base side 30 mm and axis 60mm. 12M
The prism rests on its base on the HP with a vertical face perpendicular VP.

OR

10 Draw three views of the blocks shown pictorially in figure according to first angle projection 12M



*** END ***

UNIT-III

OR

UNIT-IV