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

B.Tech I Year II Semester Supplementary Examinations October-2020

ENGINEERING GRAPHICS & DESIGN

(Common to CE, EEE, ME & AGE)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 Construct an ellipse, with distance of the focus from the directrix as 50 mm and eccentricity as $\frac{2}{3}$. Also draw normal and tangent to the curve at a point 40 mm from the directrix. **12M**

OR

- 2 Construct a parabola with base 60 and length of the axis 40. Draw a tangent to the curve at point 20 from the base. Also locate the focus and directrix to the parabola **12M**

UNIT-II

- 3 Draw the projections of the following points, keeping the distance between the projectors as 25mm on the same reference lines. **12M**

A – 20mm above HP and 30mm in front of VP

B – 20mm above HP and 30mm behind VP

C – 20mm below HP and 30mm behind VP

D – 20mm below HP and 30mm in front of VP

E – On HP and 30mm in front of VP

F – On VP and 20mm above HP

OR

- 4 Draw the projections of a straight line AB of 70 mm long, in the following positions: **12M**
- i) Inclined at 30 degree to VP, in HP and one end on VP.
- ii) Inclined at 45degree to HP, one end 20 mm above HP and parallel to and 30 mm in front of VP.
- iii) Inclined at 60 degree to VP, one end 20 mm in front of VP and parallel to and 25 mm above HP.

UNIT-III

- 5 A thin $30^\circ - 60^\circ$ set-square has its longest edge (diagonal) on HP and inclined at 30° to VP. Its surface makes an angle of 45° with HP. Draw the projections, choosing suitable size for the set-square. **12M**

OR

- 6 A pentagonal prism of base side 30mm and axis 60mm has one of its rectangular faces on the HP and the axis inclined at 60 degree to the VP. Draw its projections. **12M**

UNIT-IV

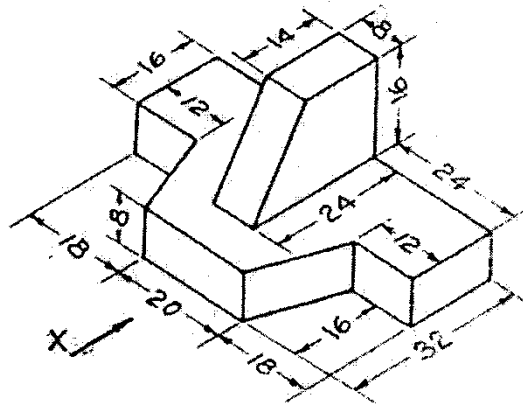
- 7 A square prism of side of base 40 mm and axis 80 mm long, is resting on its base on HP such that, a rectangular face of it is parallel to VP. Draw the development of the prism. **12M**

OR

- 8 A cone of base 50 mm diameter and height 65 mm rests with its base on HP. A section plane perpendicular to VP and inclined at 30 degree to HP bisects the axis of the cone. **12M**
 Draw the development of the lateral surface of the truncated cone.

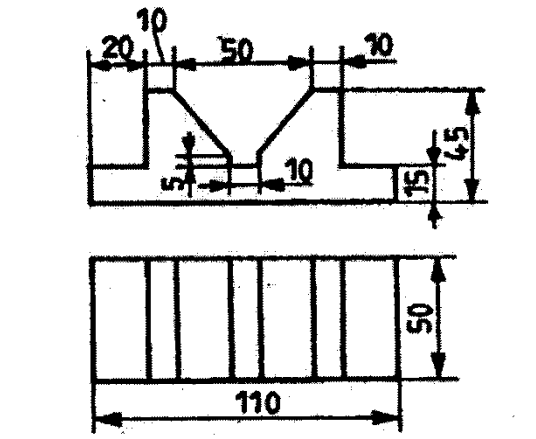
UNIT-V

- 9 Draw three views of the blocks shown pictorially in figure according to first angle projection. **12M**
 projection.



OR

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



*** END ***