

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

B.Tech I Year II Semester Regular & Supplementary Examinations August-2023

ENGINEERING GRAPHICS
(Common to CAI, CIC & CSE)

Time: 3 Hours

Max. Marks: 60

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

UNIT-I

- 1 a Construct a parabola with base 120 and length of the axis 60 by using Rectangle method. **CO1 L3 6M**
b Construct a parabola in a parallelogram of sides 100 x 60 with an included angle of 75°. **CO1 L3 6M**

OR

- 2 Draw an Epi-cycloid of rolling circle of diameter 40 mm which rolls outside another circle (base circle) of 150 mm diameter for one evolution and construct a tangent and normal at any point on the curve. **CO1 L3 12M**

UNIT-II

- 3 A point A is 20mm above the HP and 50mm in front of the VP. Another point B is 40mm below the HP and 15mm behind the VP. The distance between the projectors of the points, measured parallel to xy, is 75mm. Draw the projections of the points. Draw lines joining their FVs and TVs **CO2 L3 12M**

OR

- 4 A line NS 80mm long has its end N 10mm above HP and 15mm in front of VP. The other end S is 65mm above HP and 50mm in front of VP. Draw the projections of the line and Find its true inclinations with HP & VP. **CO2 L3 12M**

UNIT-III

- 5 A regular hexagonal plane of 30 mm side has a corner on HP, and its surface is inclined at 45° to HP. Draw the projections, when the diagonal through the corner, which is on HP makes 30° with VP **CO3 L3 12M**

OR

- 6 A pentagonal prism of base side 30 mm and axis 60mm is resting on one of its rectangular faces on HP, with the axis parallel to VP. Draw its projections. **CO3 L3 12M**

UNIT-IV

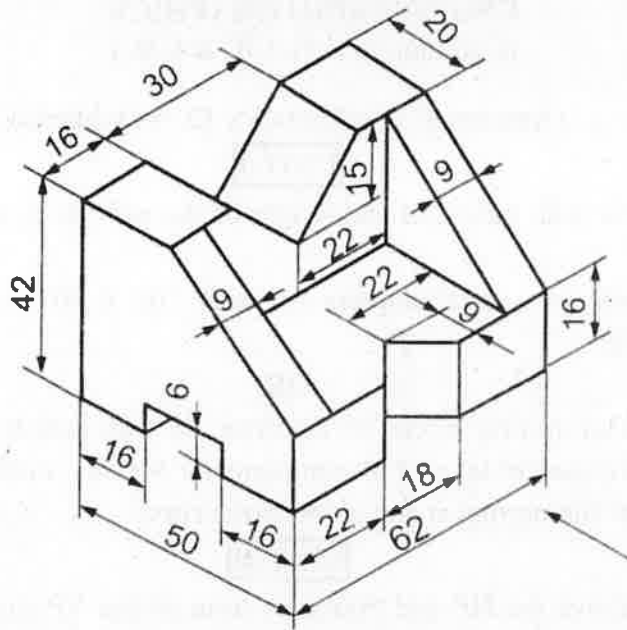
- 7 A square pyramid, with side of base 30 mm and axis 50 mm long, is resting on its base on HP with an edge of the base parallel to VP. It is cut by a section plane, perpendicular to VP and inclined at 45° to HP. The section plane is passing through the mid-point of the axis. Draw the development of the surface of the cut pyramid. **CO6 L3 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° to HP bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone. **CO6 L3 6M**

UNIT-V

- 9 Draw three views of the blocks shown pictorially in figure according to first angle projection **CO6 L4 12M**



OR

- 10 Draw the isometric projection of the frustum of a hexagonal pyramid of **CO6 L4 12M**
base side 40 mm ,top side 25mm,and height 70mm.The frustum rests on the
HP

***** END *****