

Sub Code:23ES2T04

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY &
SCIENCE
(AUTONOMOUS)

I - B. Tech II-Semester Supplementary Examinations (BR23), Sep/Oct - 2024
ENGINEERING GRAPHICS (CE, EEE, ECE)

Time: 3 hours

Max. Marks: 70M

Answer ALL the questions

PART-A (5X14 = 70M)

- 1.a) (i) Construct a regular pentagon of 30 mm side by any one method. 7(M) CO1 L1
(ii) Draw an Ellipse by general method with FD=50m.m and also draw a tangent and normal at any point 7(M) CO1 L2
- (OR)
- b) (i) A circle of 50 mm diameter rolls on the circumference of another circle of 175 mm diameter and outside it. Trace the locus of a point on the circumference of the rolling circle for one complete revolution. Name the curve. Draw a tangent and a normal to the curve at a point 125 mm from the centre of the directing circle. 7(M) CO1 L3
(ii) Construct a scale of 1:4 to show centimetres and long enough to measure up to 5 decimetres. 7(M) CO1 L2
- 2.a) (i) A point P is 50 mm from both the reference planes. Draw its projections in all possible positions. 7(M) CO2 L3
(ii) A line AB, 75 mm long, is inclined at 45° to the H.P. and 30° to the V.P. its end B is in the H.P. and 40 mm in front of the V.P. Draw its projections 7(M) CO2 L3
- (OR)
- b) Draw the projections of a regular hexagon of 25 mm side, having one of its sides in the H.P. and inclined at 60° to the V.P., and its surface making an angle of 45° with the H.P. 14(M) CO2 L2
- 3.a) (i) Draw the projections of a square pyramid having one of the triangular faces in the V.P. and the axis parallel to and 40 mm above the H.P. Base 30 mm side; axis 75 mm long. 7(M) CO3 L3
(ii) Draw the projections of a cylinder, base 30 mm diameter and axis 40 mm long, resting with a point of its base circle on HP such that the axis is making an angle of 30° and parallel to VP. 7(M) CO3 L3
- (OR)
- b) (i) A hexagonal prism, base 30 mm side and axis 75 mm long, has an edge of the base parallel to the H.P. and inclined at 45° to the V.P. Draw its projections. 7(M) CO3 L3

(ii) A square pyramid, base 40 mm side and axis 90 mm long, has a triangular face on the ground. Draw its projections. 7(M) CO3 L3

4.a) (i) A pentagonal pyramid, base 30 mm side and axis 65 mm long, has its base horizontal and an edge of the base parallel to the V.P. A horizontal section plane cuts it at a distance of 25 mm above the base. Draw its front view and sectional top view. 7(M) CO4 L4

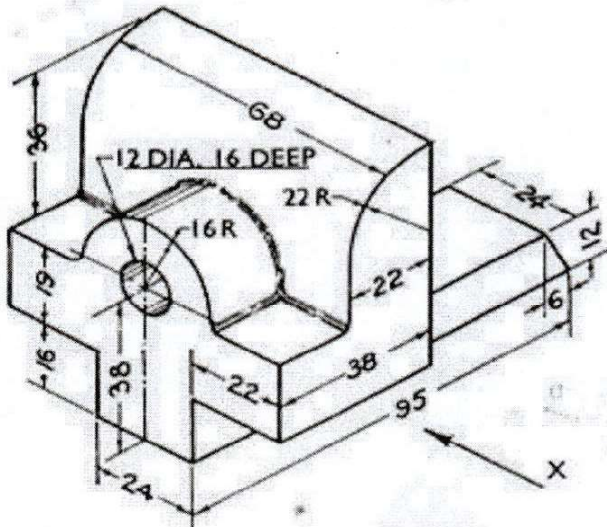
(ii) Draw the development of a cone of base 60 mm diameter, axis 75 mm long when it is cut by a section plane 45° to H.P. and passing through mid-point of the axis. Develop the lower portion of the section. 7(M) CO4 L4

(OR)

b) (i) A cube of 35 mm long edges is resting on the H.P. on one of its faces with a vertical face inclined at 30° to the V.P. it is cut by a section plane parallel to the V.P. and 9 mm away from the axis and further away from the V.P. Draw its sectional front view and the top view. 7(M) CO4 L4

(ii) Draw the development of a hexagonal prism of base side 30 mm and height 75 mm resting on H.P., when it is cut by a plane making 45° with the H.P. Develop the lower portion of the section. 7(M) CO4 L4

5.a) Draw the front view, Top view and any one side view of the following figure. 14(M) CO5 L5



(OR)

b) Draw the Isometric view for the given following orthographic view. 14(M) CO5 L5

