R19

Reg. No.

Time: 3 hours   Max. Marks:60

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

UNIT-I

1 Draw an epi-cycloid of a circle of 40 diameter, which rolls on another circle of 120 diameters for one revolution clock wise. Draw a tangent and normal to it at a point 90 from the center of the directing circle. **12M**

OR

2 Construct an ellipse when the distance between the focus and the directrix is 50 and the eccentricity is 2/ 3. Draw tangent and normal at a point 40 from the directrix. **12M**

UNIT-II

3 **a** Point A is 15 mm above HP and 20 mm in front of VP. Another point B is 25mm behind VP and 40 mm below HP. Draw the projections of A and B, Keeping the distance between the projectors equal to 90 mm. Draw straight lines joining their top views and front views. **5M**

b A semi-circular plate of 80 mm diameter , has its straight edge on V.P and inclined at 30^0 to H.P , while the surface of the plate is inclined at 45^0 to V.P .Draw the projections of the plate. **7M**

OR

4 A line AB of 80 mm long as its end A 15 mm from both H.P and V.P. The other end B is 40 mm above H.P and 50 mm in front of V.P. Draw the projections of the line and determine the inclination of the line with H.P and V.P. **12M**

UNIT-III

5 A hexagonal prism side of base 25 mm and axis 50 mm long resting with one of its base corner on H.P such that its base makes an angle of 60^0 to H.P and its axis parallel to V.P. Draw its projections. **12M**

OR

6 A cube of 50 mm edge rests on one face on H.P, with its vertical faces equally inclined to V.P. It is cut by a section plane, perpendicular to V.P, producing a large rhombus. Draw the projections, true shape of the section and determine the inclination of the section plane with H.P. **12M**

UNIT-IV

7 A pentagonal pyramid of side of base 30 mm and 60 mm long is resting on its base on H.P, with an edge of the base parallel to V.P. draw the development of the lateral surface of the pyramid. **12M**

OR

8 A vertical cylinder 60 mm diameter is penetrated by another cylinder of 45 mm diameter. **12M**
The axes of the two cylinders are intersecting at right angle. Draw the projections of the two
cylinders, showing the lines (curves) of intersection.

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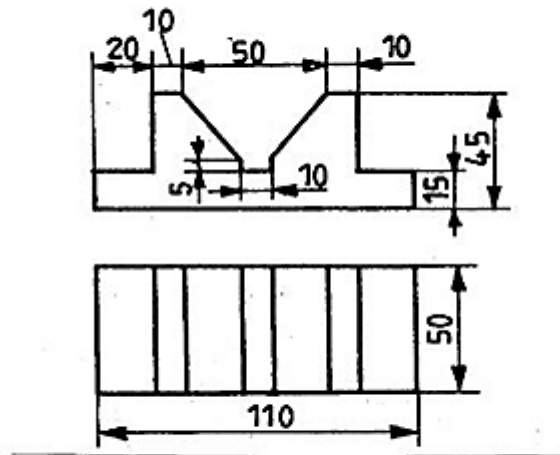
9 Draw three views of the blocks shown pictorially in figure according to first angle **12M**
projection.
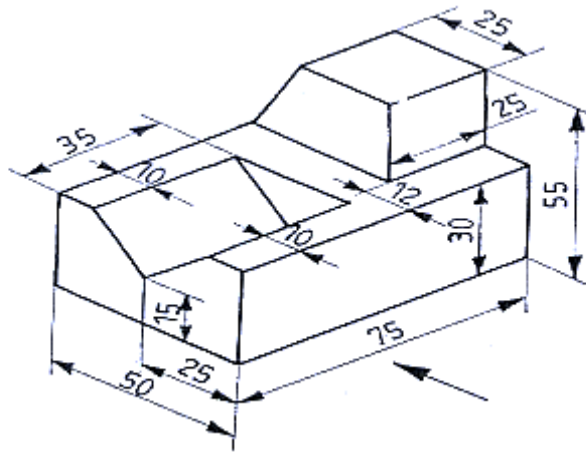
OR

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

*** END ***