Code No:21ES1109   **RM21**   **SET - 1**

I B.Tech I Semester Regular Examinations, May -2022

Engineering Graphics

(Com. to CE, ME, CSE Branches)

Time :3 hours   Max.Marks:70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks
UNIT -I

1 A) Draw the regular hexagon of side 25 mm by general method.   4M
  B) Draw a parabola when the distance between its focus and directrix is 50mm.   10M
     Also, draw a tangent and normal at a point 70 mm from the directrix.

OR

2 A) Circumscribe a pentagon on a given circle of radius 40 mm.   4M
  B) Construct a scale of 1:50 to read metres and decimetres and long enough to   10M
     measure 6 m. Mark on it a distance of 5.5 m.

UNIT -II

3 A) Draw the orthographic projections of the following points.   4M
     (a) Point P is 30 mm above H.P and 40 mm in front of V.P
     (b) Point Q is 32 mm below H.P and 45 mm behind V.P
     (c) Point R is in H.P and 30 mm is behind V.P
     (d) Point S is in V.P and 35 mm above H.P
  B) A line AB 40 mm long is parallel to V.P and inclined at an angle of 30° to H.P.   10M
     The end A is 15 mm above H.P and 20 mm in front of V.P. Draw the projections
     of the line.

OR

4 A) Draw the orthographic projections of the following points.   4M
     (a) Point T is 25 mm above H.P and 35 mm behind V.P
     (b) Point U is 35 mm below H.P and 42 mm in front of V.P
     (c) Point V is in V.P and 40 mm below H.P
     (d) Point W is in H.P and 48 mm in front of V.P
  B) Line AB 75 mm long makes 45°inclination with V.P while it's Front View   10M
     makes 55°. End A is 10 mm above H.P and 15 mm in front of V.P.If line is in 1st
     quadrant draw it's projections and find it's inclination with H.P.

UNIT -III

5 A) A square plane of side 40 mm has its surface parallel to and 20 mm above the   4M
     H.P. Draw its projections when all sides are equally inclined to the V.P.
  B) A circular plane of diameter 50 mm is resting on a point of the circumference on   10M
     the V.P. The plane is inclined at 30° to the V.P. and its centre is 35 mm above
     the H.P. Draw its projections.

OR

6 A) A pentagonal plane of side 30 mm is resting on a corner in the H.P. The side   14M
     opposite to the corner in the H.P is parallel to and 35 mm above the H.P. and
   inclined at 45° to the V.P. Draw its projections.

UNIT -IV

7   A) A cylinder of base diameter 50 mm and axis 70 mm has a generator in the V.P.   14M
        and inclined at 45° to the H.P. Draw its projections.

OR

8   A) A hexagonal prism of base edge 30 mm and axis 70 mm has an edge of its base   14M
        in the V.P. such that the axis is inclined at 30° to the V.P. and parallel to the H.P.
        Draw its projections.
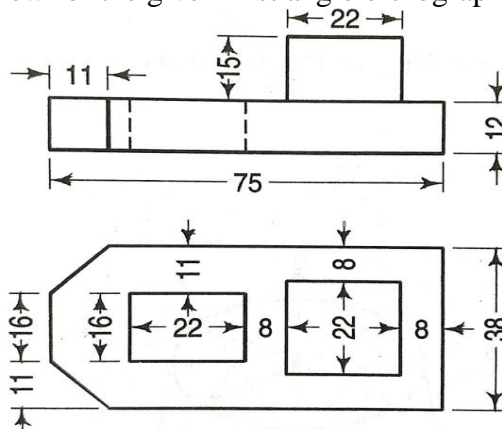
UNIT -V

9   A) Draw the front, top and side views of given isometric view.   14M
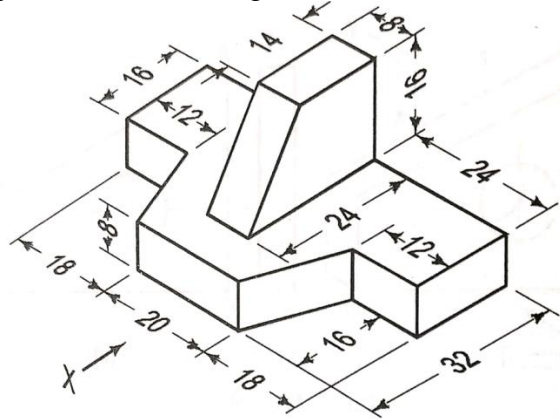
All dimensions are in mm

OR

10 A) Draw an isometric view for the given first angle orthographic projections.   14M

All dimensions are in mm