

**Engineering Graphics - I Paper - VI**

P. Pages : 3

**KNT/KW/16/7201**

Time : Three Hours



Max. Marks : 40

- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Due credit will be given to neatness and adequate dimensions.
  7. Assume suitable data whenever necessary.
  8. Retain the construction lines use of drawing instruments is permitted.

1. a) Two fixed point A and B are 80 mm apart. A point 'M' is moving in a plane of two fixed points in such a way that, the sum of its distances from the two fixed points is always constant and is equal to 120 mm construct the curve and name it. **5**
- b) A line AB of 80 mm long has 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 inclinations of the line with H.P. and V.P. **5**

**OR**

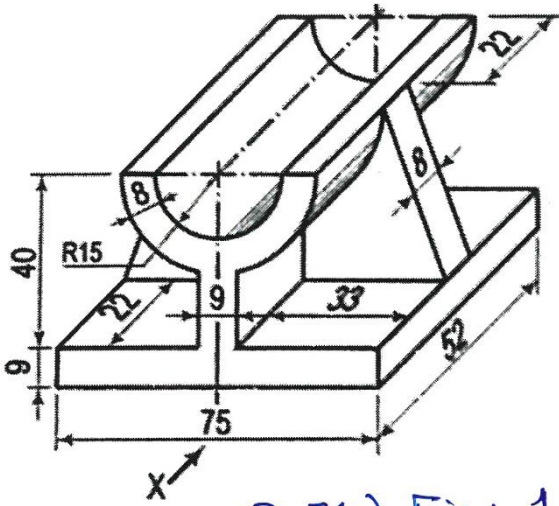
2. a) A line PQ 80 mm length has its end P 30 mm above the H.P. and 25 mm in front of V.P. line makes  $30^\circ$  to the H.P. and  $45^\circ$  to the V.P. Draw projection of line, find its true length. **5**
- b) A line AB 120 mm long is tangent at the top of circular disc of 50 mm diameter, so that point A is at the top of the circumference of the circle. The line AB rolls round the circumference of circular disc in clockwise direction. Draw the locus of the end A till end B touches the circumference of the circular disc. Name the curve. **5**
3. a) A circular plate of diameter 60 mm is kept on the V.P. on a point of its circumference. The surface of the circular plate makes an angle of  $40^\circ$  to the V.P. Draw the projections of the circle when diameter passing through the point on V.P. makes an angle of  $30^\circ$  to H.P. **5**
- b) A rectangular plane of slides 50 mm and 30 mm is hung from one end of its corners in such a way that the plane makes an angle of  $45^\circ$  with V.P. Draw the front view, top view and side view of the given plane. **5**

**OR**

4. A Hexagonal prism, side of base 30 mm and axis length 65 mm is resting on one of the corners of base on H.P. such that the longer edge through that corner makes an angle of  $30^\circ$  with the H.P. Draw the projections when its axis is inclined at  $45^\circ$  to V.P. Also draw its side view. **10**

5. a) Fig. 1 shows the pictorial view of an object. Draw its -  
i) Front view looking in the direction X  
ii) Top view  
Give dimensions and scale used.

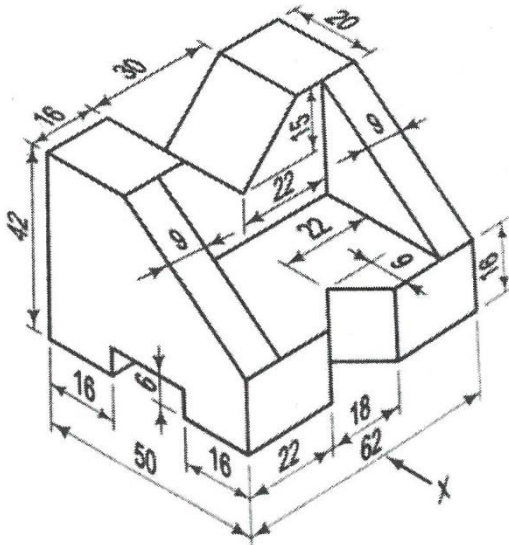
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Q 5(a) Fig.:- 1

- b) Fig. 2 shows the pictorial view of an object. Draw its :  
i) Front view looking in the direction X  
ii) Side view  
Give dimensions and scale used.

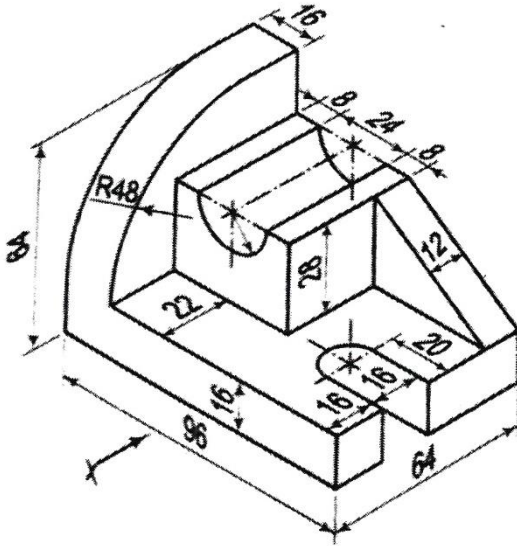
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Q 5(b) Fig.:- 2

OR

6. Fig. 3 shows the pictorial view of a machine component. Draw following views. **10**  
 i) Front view looking in the direction X.  
 ii) Top view  
 iii) Side view from right  
 Give dimensions, scale used and also draw projection symbol.

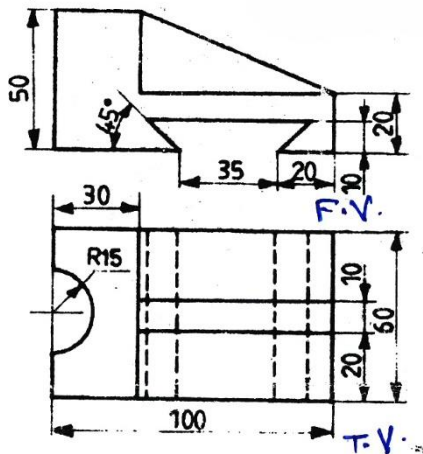


Q6: Fig.-3

7. A slab of Hexagonal prism, side of base 40 mm and height 40 mm is resting on one of its hexagonal face on H.P. with one of the base edge perpendicular to V.P. A right circular cone of base diameter 40 mm and height 55 mm is resting centrally on its base on the top hexagonal face. The axes of both solids are vertical and coinciding. Draw the isometric projection for the given arrangement of solids, show their axes and also indicate direction of viewing. Construct an isometric scale that you have used. **10**

OR

8. Fig. 4 shows the front view and Top view of an object. Draw the isometric view and also indicate the direction of viewing. **10**



Q-8 Fig.-4

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