

I B. Tech II Semester Supplementary Examinations, January/February - 2023
ENGINEERING DRAWING

(Common to Mining Engineering, Agricultural Engineering, Pharm. E)

Time: 3 hours

Max. Marks: 70

Answer any FIVE Questions ONE Question from Each Unit
All Questions Carry Equal Marks

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**UNIT - I**

1. a) Construct a parabola with in a parallelogram of sides 110mm × 50mm. One of the included angles between the sides is 70°. [7M]  
 b) Draw a Regular/Supplementary/August pentagon on a circumscribing circle of 60 mm diameter. [7M]

**(OR)**

2. a) Construct an ellipse when a pair of conjugate diameters AB and CD is equal to 110mm and 50mm respectively. The angle between the conjugate diameters is 70°. [7M]  
 b) An area of 144 sq cm on a map represents an area of 36 sq km on the field. Find the RF of the scale for this map and draw a diagonal scale to show kilometres, hectometres and decametres and to measure up to 10 kilometres. Indicate on the scale a distance of 7 kilometres, 5 hectometres and 6 decametres. [7M]

**UNIT - II**

3. a) A line measuring 80mm long has one of its ends 60mm above H.P. and 20mm in front of V.P. The other end is 15mm above H.P. and in front of V.P. The front view of the line is 60mm long. Draw the top view. [7M]  
 b) A line EF 40mm long is in the V.P. and inclined to H.P. The top view measures 30mm. The end E is 10mm above H.P. Draw the projections of the line. Determine its inclination with H.P. [7M]

**(OR)**

4. A line CD 80mm long is inclined at an angle of 30° to H.P. and 45° to V.P. The point C is 20mm above H.P. and 30mm in front of V.P. Draw the projections of the straight line. [14M]

**UNIT - III**

5. Draw the projections of a Regular/Supplementary/August hexagon of 25mm 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. [14M]

**(OR)**

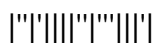
6. Draw the projections of a circle of 50mm diameter resting in the H.P. on a point A on the circumference its plane inclined at 45° to the H.P. and:  
 (a) The top view of the diameter AB making 30° angle with the V.P.  
 (b) The diameter AB making 30° angle with the V.P. [14M]

**UNIT - IV**

7. A square pyramid, base 40mm side and axis 90mm long, has a triangular face on the ground and the vertical plane containing the axis makes an angle of 45° with the V.P. Draw its projections [14M]

**(OR)**

8. Draw the projections of a pentagonal prism, base 25mm side and axis 50mm long, resting on one of its rectangular faces on the H.P., with the axis inclined at 45° to the V.P. [14M]



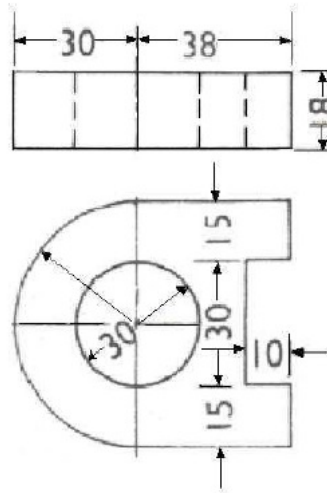
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SET - 1

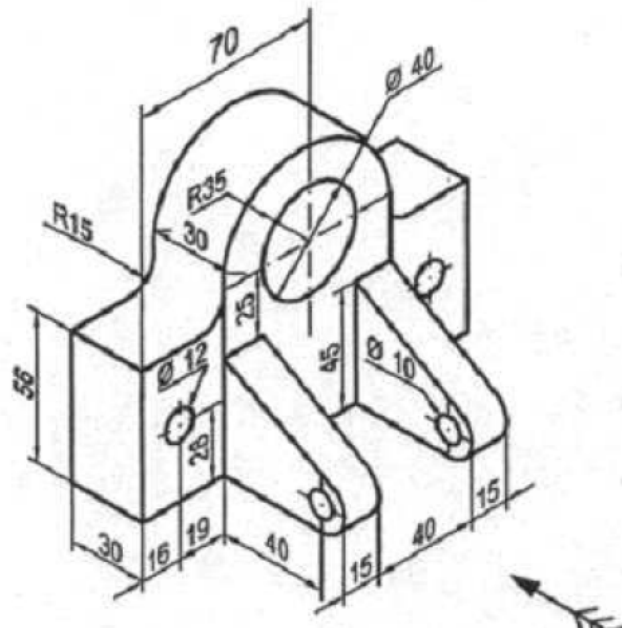
UNIT - V

9. Draw the isometric view of the block, two views of which are shown in figure [14M]  
below. (All dimensions are in mm).



(OR)

10. Draw the front view, top view and left side view of the object shown in figure [14M]  
below. All dimensions are in mm.



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