

- N.B.** (1) Question No. 1 is **compulsory**. Attempt any **four** questions out of remaining **six** questions.
 (2) Answers to the questions should be **grouped** and written **together**.
 (3) Use **drawing sheets** only for answering.
 (4) Use your **judgement** for any **unspecified** dimensions.
 (5) **All** dimensions in **figure** are in mm.
 (6) Use **first angle** method of projection unless stated **otherwise**.
 (7) Retain **all** construction lines.

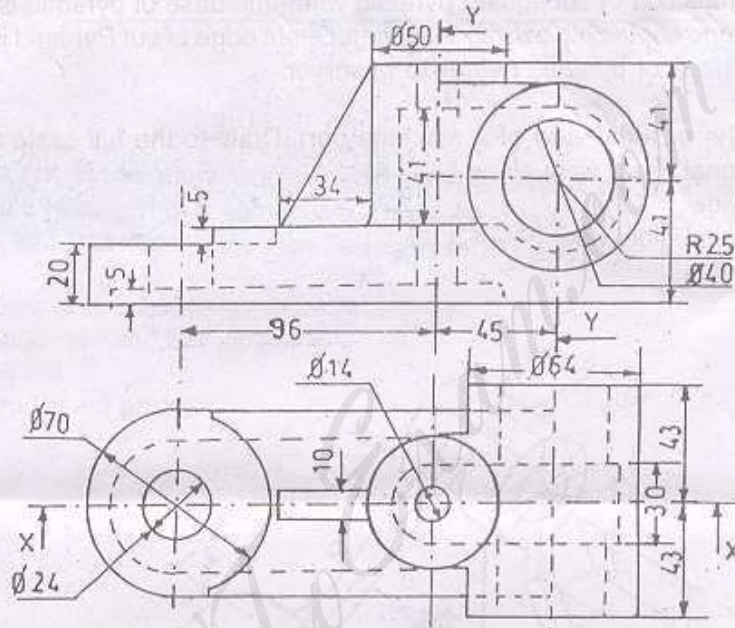
Engg. Drawing - II, May '07, Pg. 1

1. Given are the two views of a 'Gear Housing' using full scale,

- Draw :** (a) Sectional front view (x - x)
 (b) Top view
 (c) Sectional side view from right (Y - Y).

6
6
6
2

Insert all dimensions.

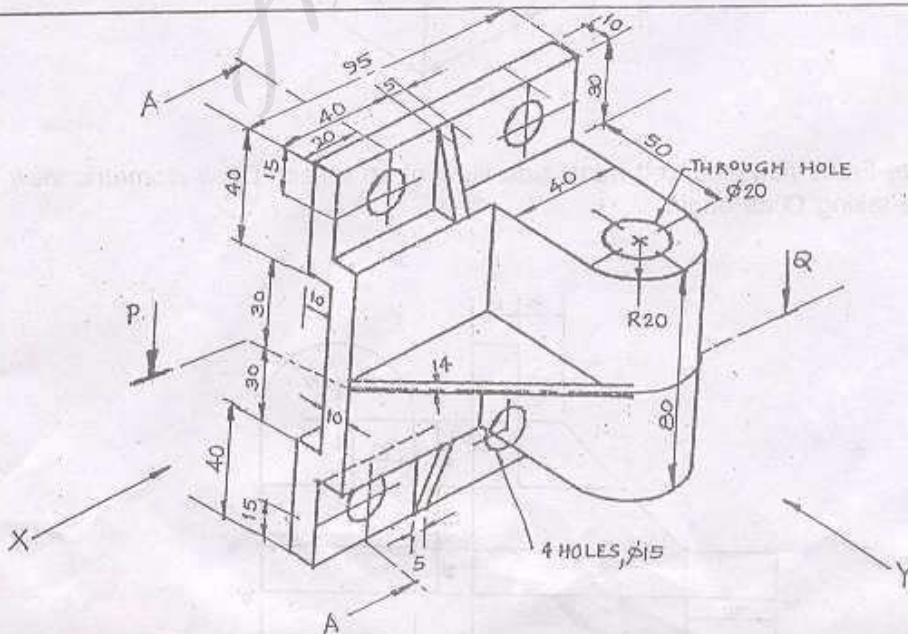


2. **Figure** shows a pictorial view of a machine block. Draw using full scale.

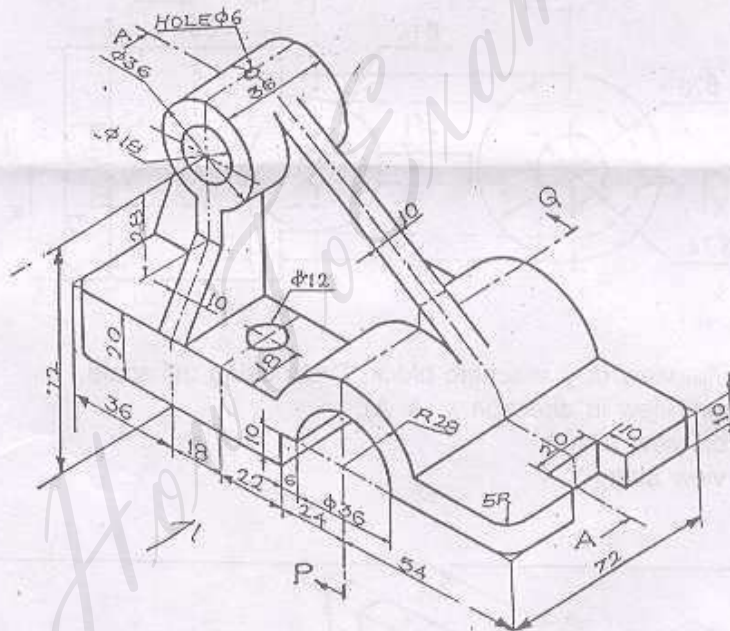
- (a) Sectional front view in direction x (A-A)
 (b) Sectional Top view (P-Q)
 (c) Right side view along Y.

6
6
6
2

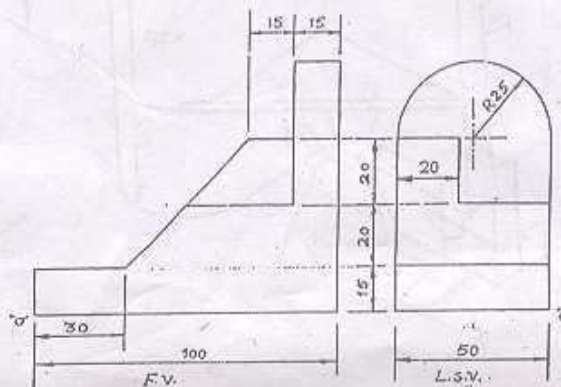
Insert all dimensions.



3. (a) PQR is a triangular lamina in the first quadrant as follows:- 10
 (i) Corner P is on the H.P. and 50 mm in front of V.P.
 (ii) Corner Q and R on the V.P.
 (iii) Elevation of lamina is equilateral triangle of 65 mm sides and the elevation p'q' is inclined at 50 degree to xy, draw the projection of lamina and find its inclination with reference planes, also obtain its True Shape.
- (b) The end M of line MN is 25 mm behind VP and 30 mm below HP, the distance between end projectors of the line MN is 90 mm, the line is inclined at 30 degree to HP and 45 degree to VP, draw its projection when N is in second quadrant, find True Length and various angles. 10
4. A square pyramid with side of the base 30 mm and height 75 mm is placed with its base on the H.P. A section plane perpendicular to front reference plane cuts the Pyramid such that the true shape of section is a pentagon of any size. Draw True Shape and inclination of section plane and also draw the projection of cut square pyramid when the base of pyramid is inclined at 40 degree to HP and the plane containing axis and the larger slant edge of cut Pyramid is inclined at 45 degree to VP. With the base of pyramid nearer to observer. 20
5. Figure shows the pictorial view of a machine part. Draw to the full scale the following views:- 5
 (a) Sectional Front view along (A - A)
 (b) Top view
 (c) Sectional side view (P - Q)
 Insert all dimension. 6
6
2



6. (a) Figure shows Front view and Left hand side view of an object. Draw isometric view using natural scale taking O as origin. 10

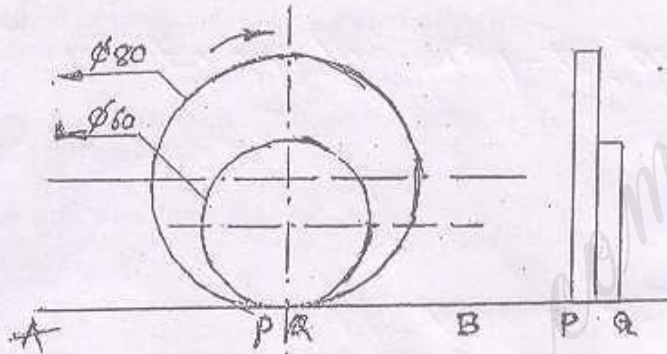


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Engg. Drawing, -II, May '07, Pg. 3

- (b) The views represent two discs which rolls along AB, both discs starts at the same point and 10 roll in the same direction, plot the curves for the movement of P and Q and state the perpendicular height of P above AB, when Q again coincides with the line AB.



7. (a) The development of the lateral surface of cone is a semi-circle of 90 mm radius, inscribe 14 largest possible Hexagon in a semi-circle. Draw the projection of solid when it rests on its base on H.P. and transfer the inscribe Hexagon in F.V. and T.V. 14
- (b) Draw two views of the following :- 6
- (i) Hexagonal head bolt ($\phi 24$)
 - (ii) Wing nut
 - (iii) Acme thread profile.