

# PIET's College of Engineering, Pune-5

End Semester Examination

Subject: ME 103 Engineering Graphics II

Programme: F. Y. B. Tech.

Year: 2005-06

Time: 4.00 Hrs

Branch: All Branches

Date: 7/7/2006

Max. Marks: 60

- Instructions:
1. All questions are compulsory and carry equal marks.
  2. Figures to the right indicate full marks for the question.
  3. Retain all construction lines & external constructions.
  4. Use suitable scale, standard data etc., if necessary. State the assumptions made.
  5. Dimensioning, line work and symbols carries due credits.
  6. Use first angle projection method.

Que. 1. A right circular cone base diameter 70 mm is resting on a point on its base edge (10) such that the axis of cone is parallel to VP and HP. It is penetrated by a pentagonal prism 25 mm base one of the lateral surface is perpendicular to HP and  $30^\circ$  VP. Axes of both solids intersect each other and penetrating solid rests on one of its base on HP. Draw the three views of assembly showing the curve of intersection.

Que.2 **Figure A** shows the pictorial view of an object. Draw using scale 1:1, i) Top view, (10) ii) Front view in the direction of X, iii) Right hand side view.

Que.3 **Figure B** shows the two views of an object. Read and reproduce the given views (10) carefully and draw i) Left hand Side View and ii) Sectional Top View.

OR

Que.3 **Figure C** shows the two views of an object. Read and reproduce the given views (10) carefully and draw i) Right hand Sectional Side View and ii) Sectional Top View.

Que.4 **Figure D** shows the lateral surface of a solid. Draw the three views and show the details on it.

OR

Que.4 A frustum of a right hexagonal pyramid, 25 mm larger and 20 mm smaller base (10) edge, rests on its larger base on HP such that one of its base edge is inclined at  $45^\circ$  to VP. A partial hole diameter 30 mm is cut through it such that the largest chord of this hole is parallel to HP and cuts the axis of pyramid in a point at a distance of 10 mm from base. The plane containing this chord is perpendicular to VP. Assuming base corner nearest to VP as an opening point, draw the two views of the solid and develop the lateral surface. Take height of frustum as 50 mm.

Que.5 Read **Figure E**. Draw the isometric projection of the object from the given views (10) about origin 'O'.

OR

Que.5 Read **Figure F**. Draw the isometric projection of the object from the given views (10) about origin 'O'.

Que.6 Draw free hand sketches (without using any geometrical instrument). (Any THREE)

a) Unified Threads internal and external. (03)

OR

a) Coupler Nut (two views) (03)

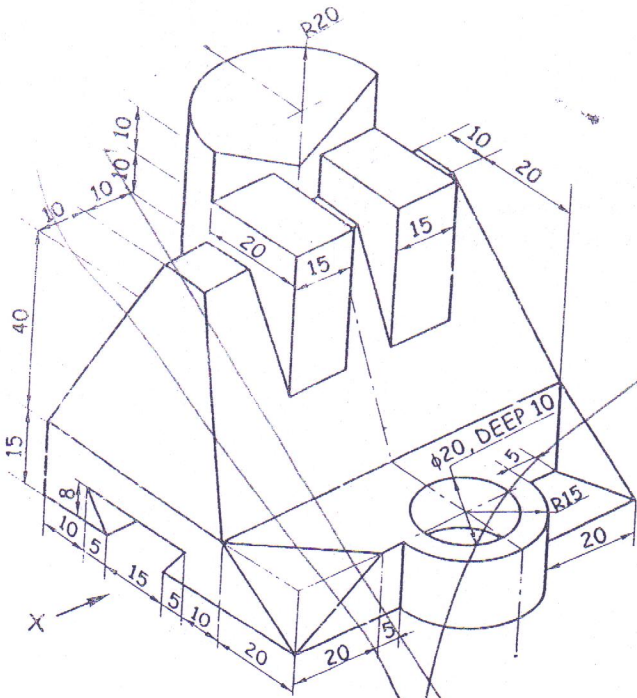
b) Locking plate (two views) (03)

c) Capstan Nut (two views) (03)

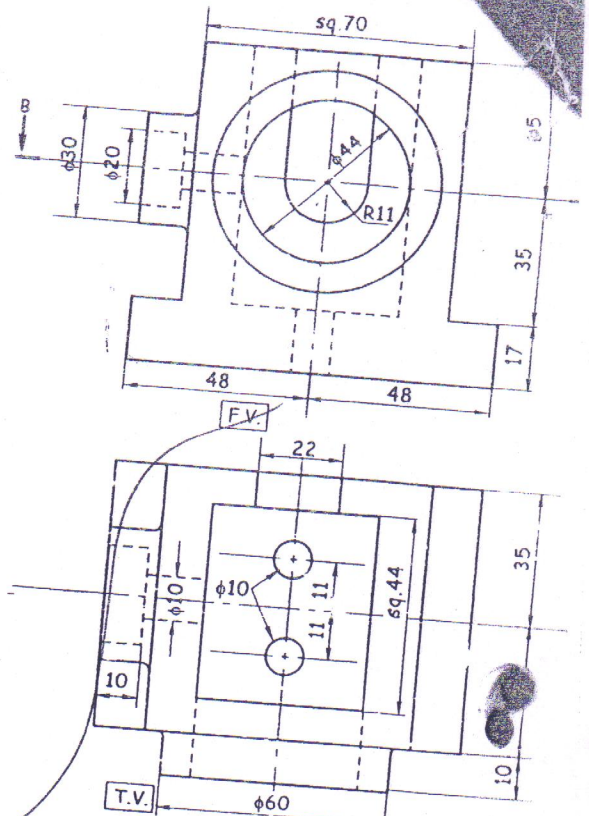
d) Socket and Spigot Joint (04)

OR

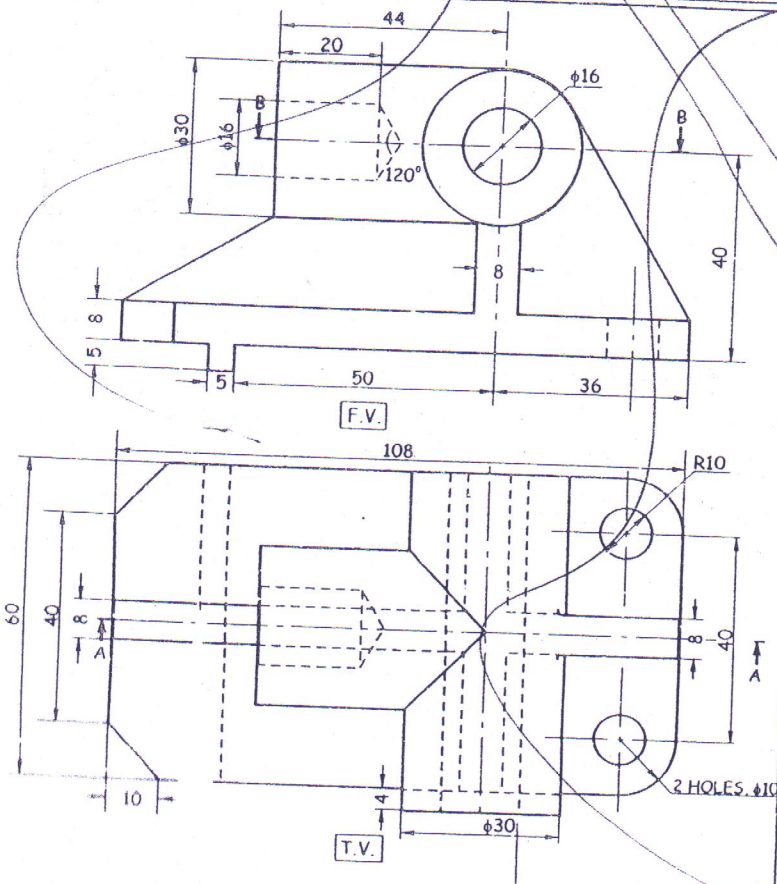
d) Pin joint or Knuckle joint (two views) (04)



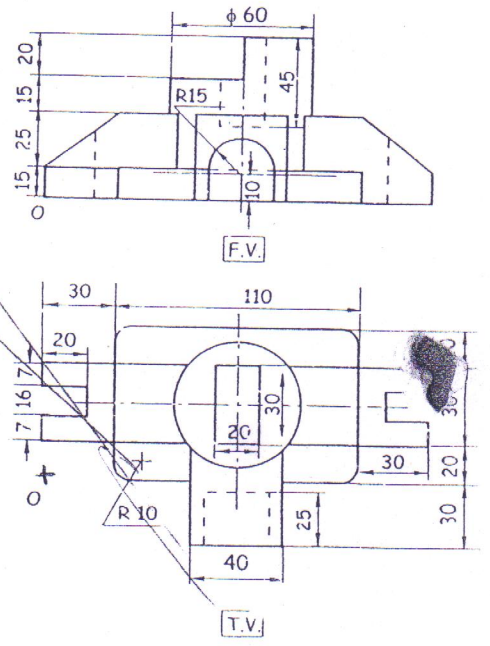
Q: 2 FIG A



Q3 : FIG B



Q: 3 FIG C



Q: 5 FIG E