Engineering Drawing
(ME-102, May 2005)

Time: 3 Hrs Max Marks: 60

Note: Section A is compulsory. Attempt any five questions from Section B and C taking at least two from each Section.

Section-A

1. (a) Where and why is a cutting plane drawn in a drawing?
   (b) What do you mean by single stroke letters?
   (c) What are oblique planes?
   (d) Give the various positions of isometric axes.
   (e) What is the importance of dimensioning?
   (f) What do you mean by development of surfaces?
   (g) Why the layout of sheet is necessary?
   (h) Why the solids are sectioned?
   (i) What are the apparent angles of inclinations?
   (j) When the auxiliary planes are used?

Section-B

2. Draw the projection of a pentagonal pyramid base 30 mm edge and axis 40 mm long is resting on horizontal plane with one of its base edge inclined at angle of 30º with VP.
3. Draw the plan and elevation of a cone (base dia = 30 mm. height = 60 mm) when its axis is inclined at 40º to HP and 50º to VP.
4. Draw a diagonal scale of 1:2.5 showing centimeters and millimeters and long enough to measure up to 20 centimeters. Show a distance of 13.4 cm on it.
5. Draw the projections of a square lamina of 30 mm side, the plane of which is inclined at 40º to the HP and one of its diagonal is horizontal.

Section-C

6. A cube of 30 mm sides rests on the top of a cylindrical slab of 500 mm diameter and 30 mm thick. The axes of the solids are in same straight line. Draw an isometric projection of the solid.
7. Draw the development of a sphere of 60 mm diameter by the zone method.
8. Two circular pipes 70 mm and 50 mm diameters meet each other at 35º. The axes of both the pipes are in one plane and the larger diameter pipe is vertical. Draw the projections showing the curves of intersection.
9. Draw the free hand sketches of foot step bearing (front and top views). Show the mean dimensions also.