Engineering Drawing
(ME-102, Dec 2006)

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) Why the layout of the sheet is necessary?
    (b) Sketch the center line, cutting plane line and long break line.
    (c) Give the difference between reducing and increasing scale.
    (d) Following symbol represents first or third angle projection.
                                            Fig.
    (e) Sectioned portion is represented by……………lines.
    (f) What is the principle of development of surfaces?
    (g) A solid having four equal equilateral triangular faces is called……..
    (h) What is an orthographic projection?
    (i) A straight line is defined as the……………………distance between two points.
    (j) What is the trace of a plane?

Section-B
2. Write freehand the following sentence using inclined capital letters of 8 mm size in single stroke using 7:5 ratio.
    'Practice makes a man perfect'
3. What do you understand by thickness of lines and various line groups?
4. A line 70 mm long makes an angle of 30° from HP and lies in a plane perpendicular to both the HP and VP. Its one end is in HP and the other end is in VP. Draw its projections.
5. A triangular prism, side of base 45 mm and length of axis 75 mm lying on one of its rectangular faces on HP such that its axis is parallel to both HP and VP. It is cut by a section plane parallel to HP at a distance of 22 mm from the HP. Draw its front view and sectional top view.

Section-C
6. A square prism of side 30 mm and 40 mm height is resting on HP. A vertical square bore of 10 mm side is cut through its face reaching other square face of the prism. Draw the isometric projection of the prism.
7. A right cylinder of 30 mm diameter and 35 mm height of axis, is cut by a section plane inclined at 30° to the HP and passes 18 mm from base along the axis. Draw the development of the truncated cylinder.
8. A vertical cylinder of 50 mm diameter and height 60 mm, standing on its base on HP is completely penetrated by horizontal cylinder of 30 mm diameter and height 60 mm. Their axis bisects each other at right angles and is parallel to VP. Draw the curves of projection in front view.
9. Draw the view from the front (arrow side) and the view from the right of the following object (all dimensions in mm).

                                            Fig.