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MANIPAL INSTITUTE OF TECHNOLOGY
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I SEM. B.E. DEGREE END SEMESTER (MAKE-UP) EXAMINATIONS JANUARY 2008

## SUBJECT: ENGINEERING GRAPHICS (MEE-103/104) REVISED CREDIT SYSTEM (12/01/2008)

MAX.MARKS: 50
Time: 4 Hours.

## Instructions to Candidates:

* Answer ANY FIVE FULL questions.
* Missing data, if any, may be suitably assumed.

1A) A line 60 mm long is inclined at $30^{\circ}$ to HP and appears to be inclined at $50^{\circ}$ to VP in the top view. One end of the line is nearer to both HP \& VP at a distance of 20 mm above HP and 30 mm in front of VP. Draw its projections. Determine the inclination to VP and also locate its traces.

1B) A rectangular lamina $30 \mathrm{~mm} \times 40 \mathrm{~mm}$ is resting on HP \& its surface is inclined to both HP \& VP in such a way that one of its diagonal appears perpendicular to XY while other parallel to XY in the front view. Draw its projections.
2. A rectangular pyramid of sides $30 \mathrm{~mm} \times 40 \mathrm{~mm}$ and height 70 mm is resting on VP with one of its longer base edges such that the apex is on HP \& the edge on VP is at a height of 30 mm above HP. Draw its projections by change of position method.
3. Draw the projections of a pentagonal pyramid having side of base 30 mm \& length of axis 70 mm when it is resting with a triangular face in HP and the base edge of that face inclined at $60^{\circ}$ to VP. Use auxiliary plane method.
4. A cylinder, 40 mm diameter and 60 mm long has its axis parallel to both HP and the VP. It is cut by a vertical section plane inclined at $20^{\circ}$ to VP, so that the axis is cut at a point 20 mm from one of its ends. Retain the larger end. Draw its sectional front view and true shape of the section.
5. Draw the complete development of the lateral surface of the transition piece shown in Fig. 1.
6. Draw the isometric projections of the component as shown in Fig.2.


Fig. 1

All dimensions are in mm.


Fig. 2

