Roll No. ....

Total Pages : 03

BT-I/D-13   **8108**

ENGINEERING GRAPHIC AND DRAWING

ME-105-E

Time : Three Hours]   [Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. Draw the projections of the following Points on a common reference line, taking a gap of 25 mm between two consecutive vertical projectors : **20**

   (i)   Point E 15 mm above H.P. and 32 mm in front of V.P.

   (ii) Point F 40 mm above H.P. and 25 mm behind V.P.

   (iii) Point G 20 mm above H.P. and in V.P.

   (iv) Point H 30 mm below H.P. and 40 mm behind V.P.

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2. Construct a scale having R.F. = 1/50,000 to read kilometers and hectometers and long enough to measure up to 8 kilometers. Measure a length of 6 km and 3 hm on the scale.   **20**

Unit II

3. Front view of a line PQ is inclined at 30° to XY line and measures 60 mm. The line is inclined at 450 to V.P. The end P is in HP and VT of the line is 20 mm below HP. Draw the projections of the line and find its true length and inclinations with the reference planes. Also locate its HT.   **20**

4. An equilateral triangle shaped plate of side 30 mm is placed parallel to HP and 10 mm above it. It is placed, such that, one of the corners of the triangle is 10 mm in front of VP and the edge containing that corner is inclined at 25° to VP. Draw the projections of the plate.   **20**

Unit III

5. A tetrahedron of side 40 mm rests with its base on HP. Draw its projections when one of its edges is perpendicular to VP.   **20**
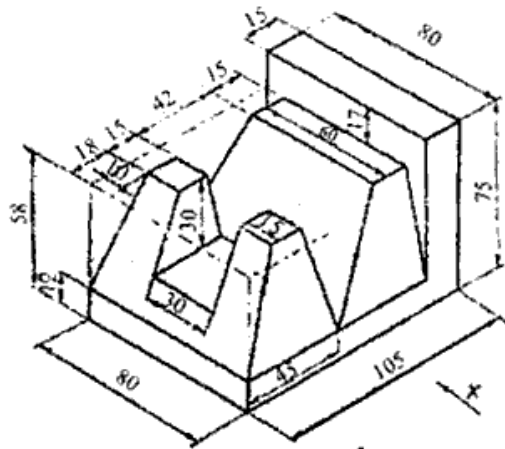
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6. Draw the development of the truncated hexagonal pyramid with a 30 mm base side and a 60 mm height, which is resting on its base in the HP such that an edge of the base is perpendicular to VP, when an auxiliary cutting plane making an angle of 60° with HP, bisects the axis. **20**

Unit IV

7. Draw the front view, top view and left side view of the following object : **20**

8. Draw the profiles of the following screw threads : **20**

   (a) Knuckle Thread

   (b) ISO Metric thread

   (c) Buttress thread

   (d) Acme Thread.