MAY 2011

B. Tech. (Sem. - 1st)
ENGINEERING DRAWING
SUBJECT CODE : ME - 102
Paper ID : [A0125]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours   Maximum Marks : 60

Instruction to Candidates:

1) Section - A is **Compulsory**.

2) Attempt any **Five** questions from Section - B & C.

3) Select atleast **Two** questions from section - B & C.

Section - A

Q1)   *(Marks: 2 each)*

a) What do you understand by auxiliary vertical plane?

b) Draw the symbol of third angle projection system.

c) Why is it not possible to make a drawing using fourth angle projection system?

d) Draw any two types of lines and give their applications.

e) What is an enlarging scale? Give an example.

f) Explain the method of dimensioning a circle with the help of an example.

g) What is an isometric scale?

h) Briefly explain the unidirectional system of dimensioning.

i) Give two examples of solids of revolution.

j) Draw the plan and elevation of a 50 mm long line AB which is perpendicular to HP and parallel to VP.

Section - B

(Marks: 8 each)

Q2) Construct a diagonal scale to read metres, decimetres and centimetres for a R.F. of 1/50 and long enough to measure up to 5 metres. Show on this scale the following distances:

(a) 2.89 metres.

(b) 3.67 metres and

(c) 4.44 metres.

Q3) A plane having the shape of an isosceles triangle of base 40 mm and altitude 60 mm is inclined to HP in such a way that its top view is an equilateral triangle of 40 mm each side. Its base, which is fully contained in HP, is inclined at 45° to VP. Draw its projections and find out the true inclination of the plane with HP.

Q4) A right regular pentagonal pyramid, side of the base 30 mm and height 60 mm, has one of its slant edges in HP. One of the base edges of the pyramid is parallel to HP and inclined at 45° to VP. Draw its projections.

Q5) A right circular cone of base diameter 45 mm and axis 65 mm long, is lying on one of its generators on HP. A sectional plane inclined to HP at 30° bisects its axis. Draw the apparent and true shape of the section.

Section - C

(Marks: 8 each)

Q6) Two orthographic views of an object are shown in Figure 1 below. Draw its isometric view.
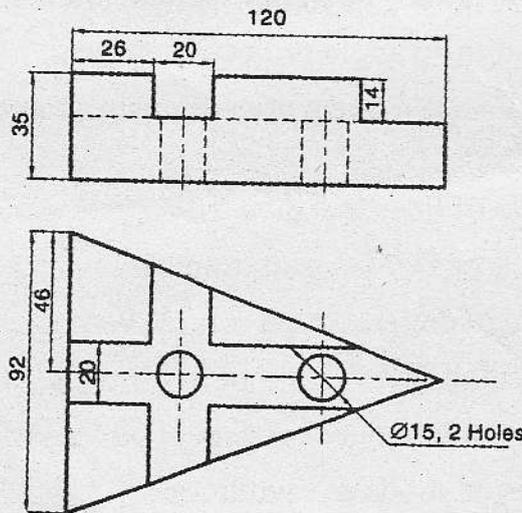
Figure 1

Q7) A right regular square pyramid of base edge 35 mm and height 55 mm rests on top of a right circular cylinder of base diameter 50 mm and height 70 mm such that the axes of the two solids are along the same vertical line. The base edges of the square pyramid are equally inclined to VP. Draw a neat freehand isometric sketch of the assembly.

Q8) Two portions of a square prism have been removed as shown in its front view in Figure 2 below. Take side of the base = 40 mm and length of the axis =70 mm. The axis of the solid is inclined at 45° to HP. Develop the remaining portion of the solid.
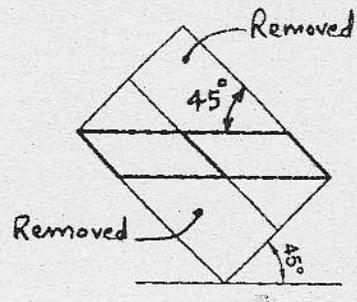

Removed

45°

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45°

Figure 2

Q9) A vertical cylinder of base diameter 40 mm and height 70 mm, resting on its base on HP, is completely penetrated by another horizontal cylinder of base diameter 30 mm and height 70 mm such that their axes bisect each other at right angles. Draw the projections of the solids showing curves of intersection.

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