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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(2007-2010 Batches) (Sem.-1,2)
ENGINEERING DRAWING & COMPUTER GRAPHICS

Subject Code : ME-102

Paper ID : [A0125]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION - B & C. have FOUR questions each.
3. Attempt any FIVE questions from SECTION B & C carrying EIGHT marks each.
4. Select atleast TWO questions from SECTION - B & C.

SECTION-A1. **Write briefly :**

- a) Name the methods to determine the true length and true inclinations of a straight line.
- b) What are Auxiliary Vertical Plane (AVP) and Auxiliary Inclined Plane (AIP)?
- c) What is a Profile Plane?
- d) Draw a symbol of First angle projections.
- e) How a Point is determined in space?
- f) Why the layout of sheet is necessary?
- g) Explain with the help of a simple sketch (i) size dimensions (ii) location dimensions.
- h) What do you understand by V.T. and H.T. of section plane?
- i) Give the practical applications of the intersection of surfaces or interpenetration of solids.
- j) What is stretch out or girth line?

SECTION-B

2. The projection of the ends of a line EF are 60 mm apart, end E is 15 mm above HP and 20 mm in front of VP. End F is 10 mm below HP and 35 mm behind VP. Determine its true length, traces and inclination of the line with the two reference planes.
3. Draw a diagonal scale of RF = 1/25 to read metres, decimeters and centimeters. The scale must be long enough to read 5m. Mark off this scale distances of 2.64m and 0.78m.

4. A regular pentagon of 30 mm sides is resting on HP on one of its sides while its opposite vertex (corner) is 30 mm above HP. Draw projections when side in HP is 30° inclined to VP.
5. A right circular cone, 40 mm base diameter and 60 mm long axis is resting on HP on one point of base circle such that its axis makes 45° inclination with HP and 40° inclination with VP. Draw its projections.

SECTION-C

6. A cone, 50 mm base diameter and 70 mm axis is standing on its base on HP. It is cut by a section plane 45° inclined to HP through base end of end generator. Draw projections, sectional views, true shape of section and development of surfaces of remaining solid.
7. A cylinder 50mm dia. and 70mm axis is completely penetrated by a square prism of 25 mm side and 70 mm axis, horizontally. Both axes intersect & bisect each other. All faces of prism are equally inclined to HP. Draw projections showing curves of intersections.
8. 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.
9. A circular plate is pierced through centrally by a square pyramid which comes out equally from both faces of plate. Its F.V & T.V are shown in fig. below. Draw Isometric view.

