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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (2011 Onwards) (Sem.-1,2)

ENGINEERING DRAWING

Subject Code : BTME-102

Paper ID : [A1110]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS 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-A**1. Write briefly :**

- a) Draw the symbol used for First angle and third angle projections.
- b) Show the unidirectional system of dimensioning.
- c) What is a scale? Write down its types.
- d) How the object is imagined to be placed in first angle projection.
- e) What is an auxiliary plane? Name its types.
- f) What do you mean by polyhedra and how it is subdivided?
- g) What is meant by true-section; how it is different from apparent section?
- h) Draw free hand the isometric scale.
- i) Draw the trace of a line when it is kept parallel to HP and inclined to VP name the trace. (Free hand sketch can be drawn).
- j) What is the difference between a Prism and a Pyramid?

SECTION-B

2. The distance between two cities A & B is 300 kilometers. Its equivalent distance on the map measures only 6 cms. What is the RF? Draw the diagonal scale to show hundreds of kms, tens of kms and kilometers? Indicate on the scale a distance of 277 kms.
3. A point P is 30 mm above HP and its shortest distance from xy is 55 mm. The point P lies in the first quadrant. Draw its projections.
4. Draw the projections of a straight line AB 70 mm long which is inclined to 30° to HP and 45° to VP. The end point A is 20 mm above HP and 15 mm in front of VP.
5. A right regular pentagonal pyramid edge of base 25 mm and height 50 mm is resting on one of its triangular faces on HP with its axis parallel to VP. Draw its projections.

SECTION-C

6. A cylinder of 40 mm dia and 60 mm long is lying in such a way that its axis makes an angle of 30° with VP. It is cut by a horizontal sectional plane perpendicular to VP at a distance of 12 mm above the axis of the cylinder. Draw its projections showing sectional plant.
7. A vertical cylinder of 50 mm dia and height 70 mm resting on the HP is completely penetrated by another cylinder of the same dia and length. Their axes bisect each other at right angles and are parallel to VP. Draw their projections showing lines of interpenetration on the two cylinders.
8. Develop the surface of the square pyramid having base edge 25 mm and axis 55 long when it is resting on HP with one of its base edge perpendicular to V.P.
9. A square prism of side 30 mm and 40 mm height is resting on HP. A vertical square hole of 15 mm side is cut through the square face in such a manner that it reaches centrally to the other square face of the prism. Draw its isometric view.