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Total No. of Pages : 03

Total No. of Questions : 09

B.Tech. (2011 to 2017) (Sem.-1,2)

ENGINEERING DRAWING

Subject Code : BTME-102

M.Code : 54102

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 EACH from SECTION - B & C.

SECTION-A

1. Answer briefly / Fill in the blanks :

- (a) What is the Representative Fraction (R.F.) or Scale Factor (S.F.)?
- (b) Draw symbol for first angle projections.
- (c) Define single stroke Gothic lettering system for alphabets.
- (d) What is the difference between the true angle and the virtual angle of a line?
- (e) What do you mean by true solid?
- (f) Distinguish between frustum and truncated solid.
- (g) *“In development of a cone and cylinder, the chord length between two successive points on the circumference is used for development, instead of the arc length. Is it a correct approach”?* Comment.
- (h) If a plane is perpendicular to HP and parallel to VP, its projection on HP will reveal its view.
- (i) A cylinder is formed by rotation of about its
- (j) The three forms of axonometric projections are isometric and projections.

SECTION-B

2. A line AB has the end A 10 mm in front of VP & 20 mm above HP and end B 55 mm in front of VP and 50 mm above HP. Distance between end projectors is 50mm. Draw the projection of line & determine its true length (TL), true inclinations θ , ϕ using rotation of line method. Also locate the midpoint of the line on projections and TL.
3. The centre lines of two pipes **ab** and **cd** are shown in figure 1. Find the shortest distance between the two lines. Also project this shortest distance back on the front and top views.

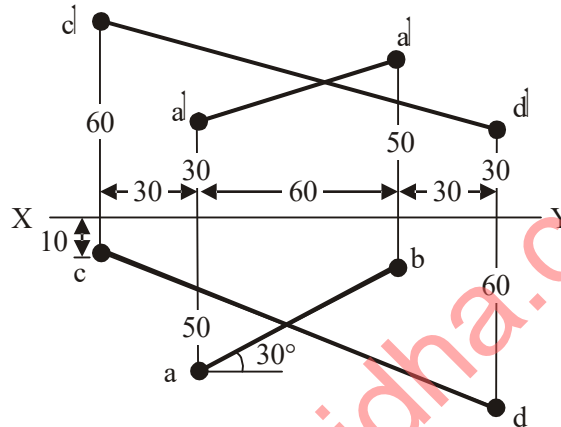


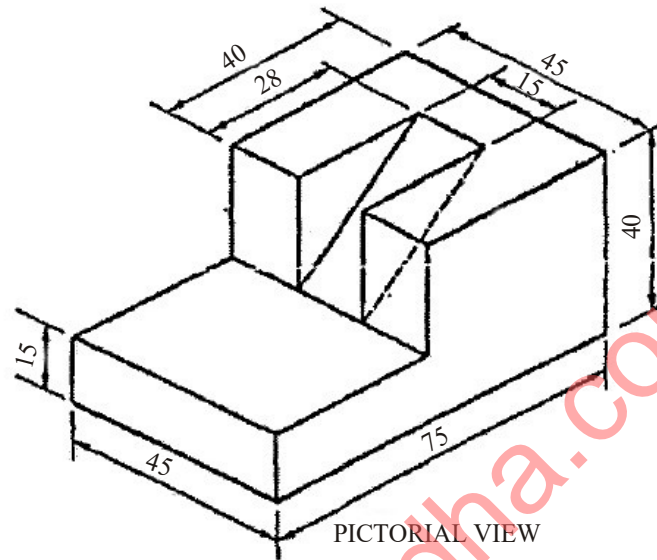
FIG.1

4. A square lamina of 40 mm side rests on one of its edges on the HP. The lamina makes an angle of 45° to the HP and the side on which it rests makes 30° to the VP. Draw the projections of the lamina.
5. A cone of 35 mm base diameter and 60mm height has its axis inclined at 30° to HP and the plan of the axis is inclined at 45° to VP. Draw the projections of the solid.

SECTION-C

6. A hexagonal pyramid side of base 25 mm and axis 50 mm long rests with its base on HP and an edge of its base is perpendicular to VP. It is cut by section plane perpendicular to VP, inclined at 30° to HP and passing through a point on axis 20mm below apex. Draw the sectional front, top views and true shape of the section.
7. A hexagonal prism, side of base 20 mm and axis 50 mm, rests with its base on HP such that one of its rectangular faces is parallel to VP. It is cut by a plane perpendicular to VP, inclined at 45° to HP and passing through right corner of the prism. Draw the sectional top view, and develop the lateral surface of the truncated prism.

8. A right circular cone of diameter 30 mm and height 36 mm rests centrally on top of square block 48 mm side and 22 mm thick. Draw the isometric projection of two solids.
9. Draw the front, top and left side views of the solid given below :



PICTORIAL VIEW

FIG.2

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.