[Total No. of Questions - 9] [Total No. of Printed Pages - 4]
(2123)

1308

B. Tech 1st Semester Examination

Engineering Drawing & Graphics (N.S.)

BE-103

Time : 3 Hours **Max. Marks : 100**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : (i) A drawing Sheet is needed to attempt this question paper.

(ii) Attempt five questions in all, select one question from each sections A, B, C and D. Section E is compulsory.

SECTION - A

1. Draw a vernier scale of R.F. = 5 to read $\frac{1}{5}$ cm and $\frac{1}{25}$ cm and to measure up to 5 cm. Mark on the scale distance of 2.12 cm. **(20)**

2. A composite plate of negligible thickness is made-up of a rectangle 60 mm×40 mm, and a semi-circle on its longer side. Draw its projections when the longer side is parallel to the H.P. and inclined at 45° to V.P., the surface of the plate making 30° angle with the H.P. **(20)**

SECTION - B

3. A hexagonal prism has a face on the H.P. and the axis parallel to the V.P. It is cut by a vertical section plane, the H.T. of which makes an angle of 45° with xy and which cuts the axis at a point 20 mm from one of its ends. Draw its sectional front view and the true shape of the section. Side of base 25 mm long; Height 65 mm. **(20)**

4. A square pyramid, base 40 mm side and axis 75 mm long is placed on the ground on one of its slant edges, so that the vertical plane passing through the edge and the axis makes an angle of 30° with the V.P. Draw its three views. **(20)**

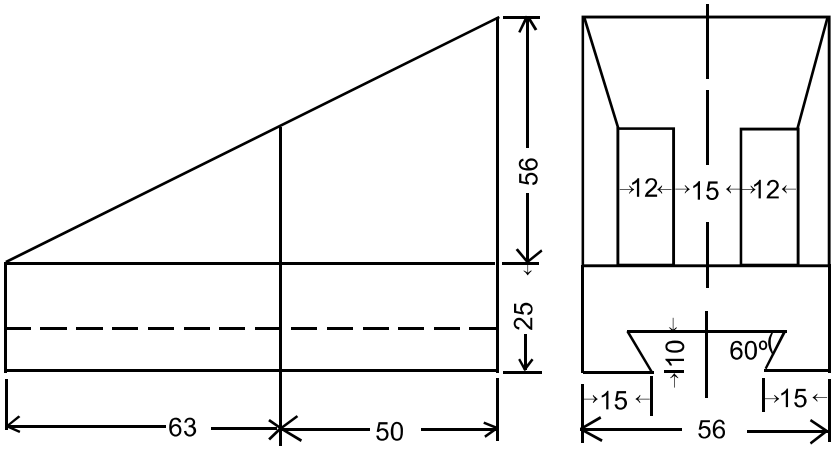
SECTION - C

5. Develop the surface of square pyramid having base edge 25 mm and axis 55 mm long. **(20)**

6. A pentagonal prism, side of the pentagon 25 mm and height 65 mm, rests with its base on H.P. One edge of the base is inclined at 60° to V.P. A square prism, sides of the square 20 mm and length 60 mm penetrates the pentagonal prism with its axis horizontal and bisecting the axis of the pentagonal prism. Draw the top view and the front view of the solid. **(20)**

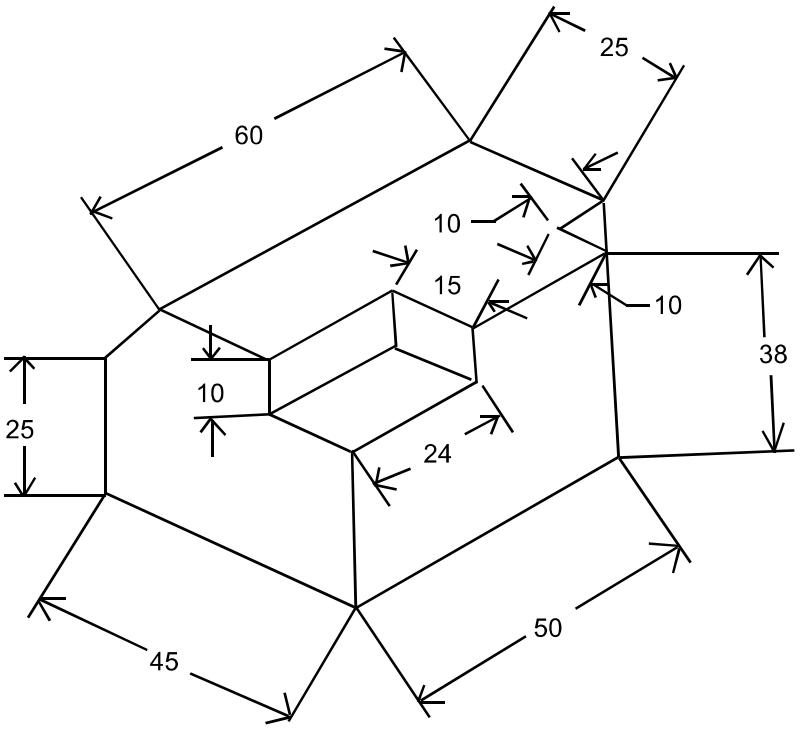
SECTION - D

7. Draw the isometric view of the casting shown in two views in figure below. **(20)**



First-angle projection

8. Draw top view, front view and left hand side view of the object shown below: **(20)**



SECTION - E

9. Answer the following (Fill in the blanks/tick the right/define/draw)

   (a) The ratio of the length of the drawing of the object to the actual length of the object is called _____?

   (b) In first angle projection method, the _____ view is always below the front view.

   (c) A point has simply _____ but no magnitude and direction.

[P.T.O.]

(d) When a line is inclined to H.P., then the point of intersection of line to H.P. is called *H.T./V.T.*

(e) The lines in which planes meet the reference plane are called _____ of the planes.

(f) A solid having a plane figure for its base and equal number of triangular faces meeting at a point is called *Prism/ Pyramid.*

(g) The true shape of the section is a eclipse, when a cylinder is cut by a section plane inclined to the axis. *(True/False)*

(h) The intersection between a solid body and straight line is a *Point/Line.*

(i) Approximate method is used for developing sphere. *(True/ False)*

(j) A circle in isometric projection appears as _____.

(10×2=20)