

16015(D) 0 DEC 2016

B. Tech 1st Semester Examination
Engineering Drawing & Graphics (NS)
BE-103

SECTION - C

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 : Section E is compulsory and must be written in ink. Attempt any four questions at least one each from sections A to D.

SECTION - A

1. On a building plan, a line 20cm long represents a distance of 10m. Devise a diagonal scale for the plan to read up to 12m, showing meters, decimeters and centimeters. Show on scale the lengths of 0.97m and 11.14m. (20)
2. A 60° Set square of 125 mm longest side is so kept that the longest side is in H.P. making an angle of 30° with V.P. and Set square itself is inclined at 45° to H.P. Draw the projections of Set square. (20)

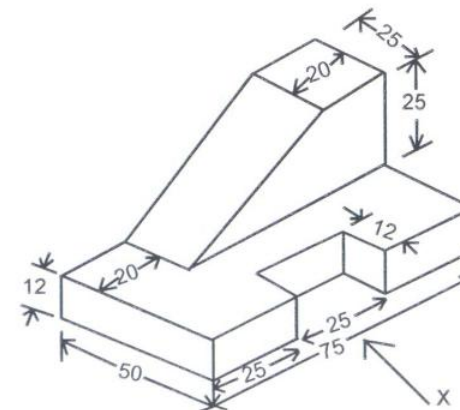
SECTION - B

3. A thin lamp shade in the form of a frustum of a cone has its larger end 200 mm diameter, smaller end 75 mm diameter and height 150 mm. Draw its three views when it is lying on its side on the ground and the axis parallel to the V.P. (20)
4. A cube of 65 mm long edges has its vertical faces equally inclined to the V.P. It is cut by a section plane, perpendicular to the V.P., so that the true shape of the section is a regular hexagon. Determine the inclination of the cutting plane with the H.P. and draw the sectional top view and true shape of the section. (20)

5. A cone of diameter 50 mm, height 70 mm has been cut by a plane inclined at 45° to H.P. Plane intersects axis at height of 45 mm above the base. Draw development of lateral surface of lower portion of cone. (20)
6. A cylindrical pipe of 30mm diameter has a similar branch of the same size. The axis of the main pipe is vertical and is intersected by that of the branch at right angles. Draw the projections of the pipes, assuming suitable lengths, when the two axes lie in a plane parallel to the V.P. Develop the surfaces of the two pipes. (20)

SECTION - D

7. A cylinder of base, 60 mm diameter and height 90 mm, is standing on the H.P with its axis perpendicular to the H.P. Draw its isometric view. (20)
8. Using first angle projection method, draw scale full size, orthographic view of the object given in the figure below. The front view should be drawn as seen in the direction of the arrow X. (20)



SECTION - E

9. Fill in the blanks in the following sentences using appropriate words.
- (i) Lettering is usually done in _____ letters.
 - (ii) When the drawing is drawn of the same size as that of the object, the scale used is _____.
 - (iii) State the quadrant when the projections of point Q coincide with each other 40 mm below xy. _____
 - (iv) When adding dimensions to an auxiliary view it will be necessary to use the _____ too.
 - (v) Line composed of closely and evenly spaced short dashes in a drawing represent _____ edges.
 - (vi) Comparative scale is a pair of scale having a common _____.
 - (vii) If a plane is parallel to the plane of projection, it appears of _____ size.
 - (viii) A fillet is a rounded surface on the _____ corner of a part.
 - (ix) The _____ plane upon which the top view is projected.
 - (x) In an isometric drawing, lines that are not parallel to the isometric axes are called _____ lines.

(2×10=20)