

[Total No. of Questions - 9] [Total No. of Printed Pages - 4]
(2064)

14608

B. Tech 2nd Semester Examination
Engineering Drawing and 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. A line AB, 80 mm long is inclined at 60° to the HP and its top view makes an angle of 45° with the VP. The end A is in the HP and 10 mm in front of VP. Draw its front view and find out its inclination with the VP. Also draw the traces of line. (20)
2. Draw the projections of a circle of 50 mm diameter resting on the ground on a point A on the circumference, its plane inclined at 45° to the HP and (a) the top view of the diameter AB making 30° angle with the VP; (b) the diameter AB making 30° angle with the VP. (20)

SECTION - B

3. A triangular prism, base 30 mm side and axis 50 mm long, is lying on the ground on one of its rectangular faces with its axis inclined at 30° to the V.P. It is cut by a horizontal section plane, at a distance of 12 mm above the ground. Draw its front view and sectional top view. (20)

14608/2800

[P.T.O.]

4. Draw the projections of a pentagonal prism, base 30 mm side and axis 60 mm long, resting on one of its rectangular faces on the ground, with the axis inclined at 45° to the VP. (20)

SECTION - C

5. A right circular cone, diameter of base 40 mm and height 55 mm rests on its flat end on HP. The front view is cut by a plane passing through the mid-height point of the cone at an angle of 30° to the HP. Draw the development of surface of the cone. (20)
6. A triangular pyramid, having base 45 mm side and axis 70 mm long, is lying on the ground on one of its faces, with the axis parallel to the VP. A section plane, parallel to the VP, cuts the pyramid at a distance of 15 mm from the axis. Draw the sectional front view and the top view. (20)

SECTION - D

7. Draw the isometric view of the casting, two views of which are shown in third angle projection in Fig. 1 (20)

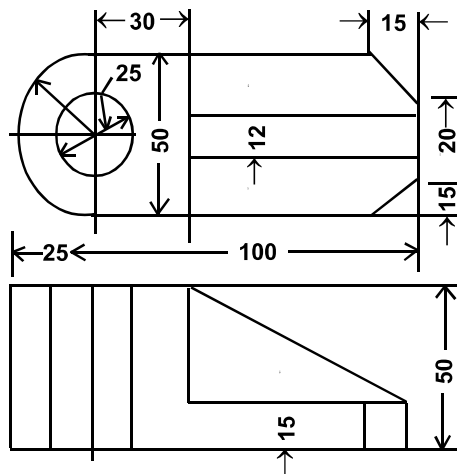


Fig. 1

8. Determine the magnitude of forces in the simple truss given in Fig. 2, using graphical method. (20)

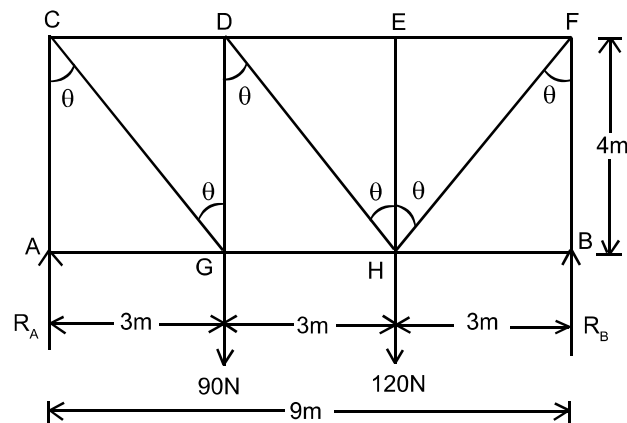


Fig. 2

SECTION - E

9. Reply the following (Fill in the blanks/tick the right one/define/draw) (10×2=20)
- Oblique prisms and pyramids have their axis inclined to their _____
 - When a cone is cut by planes at different angles, the curves of intersection are called _____
 - Prisms and pyramids are named according to the shape of their _____
 - The trace of a line is always a _____ whereas trace of a plane is always a _____

[P.T.O.]

- (e) A right circular cone is a solid generated by the revolution of a _____
- (f) The inclined letters slope to the right by an angle of _____ degrees.
- (g) Draw a standard long break line.
- (h) The ratio of the length of the drawing of the object to the actual length of the object is called _____
- (i) When the measurements required are in three units _____ or _____ scale is used.
- (j) When a plane is parallel to a reference plane, it has no trace on that plane. Its trace on the other reference plane, to which it is perpendicular is 'parallel / perpendicular' to xy.