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25226

4 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Answer each next main Question on a new page.
- (3) Illustrate your answer with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Assume suitable data, if necessary.
- (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any TWO of the following: 08

- a) A Line AB, 90 mm Long, has its end A 20 mm above H.P. and 25 mm in front of V.P. The line is inclined at 30° to H.P. and 45° to V.P. Draw the projections.
- b) A line AB, 60 mm long is inclined at an angle of 30° to the V.P. Its end point 'A' is on the H.P. and 30 mm in front of the V.P. End 'B' of the line is 30 mm above the H.P. Draw the projections of the line AB assuming it to be in the first quadrant.
- c) A square plate ABCD of side 50 mm rests on the corner 'A' on the H.P. in such a way that diagonal AC makes an angle of 40° with the H.P. Draw three views of the plate when diagonal BD is perpendicular to V.P.

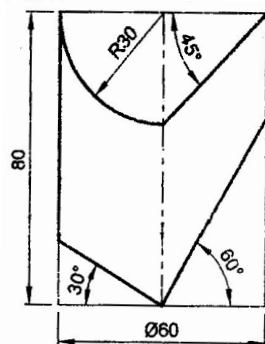
P.T.O.

- b) A hexagonal pyramid base 25 mm side and axis 55 mm long, has triangular face in V.P. and axis parallel to H.P. Draw its projections.
- c) A square prism side of base 40 mm, axis length 80 mm is kept on the H.P. with its sides of base equally inclined with V.P. A circular hole of diameter 40 mm is drilled through the prism such that axis of hole is perpendicular to V.P. and parallel to H.P. and bisects the axis of square prism. Draw the development of lateral surface of the prism.

5. Attempt any TWO of the following:

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- a) A vertical cone of base diameter 70 mm and axis height 65 mm is kept on the H.P. on its base. It is penetrated by a horizontal cylinder of diameter 35 mm with its axis parallel to V.P. and intersecting the axis of the cone at a distance of 20 mm above the base of the cone. Draw the projections of solids showing curves of intersection.
- b) A square pyramid 50 mm edge of base axis 60 mm length is resting on its base in the H.P. with edges of base equally inclined to V.P. A square hole with side 25 mm is cut through the square pyramid such that its axis intersect the axis of the pyramid 22 mm above the base. The axis of hole is perpendicular to V.P. All the faces of square hole are equally inclined with H.P. Draw the development of pyramid.
- c) Draw the development of the lateral surface of the cylinder shown in Figure No. 4.



All dimensions
are in mm

Fig. No. 4