13-05-2026 FE SEM-II (NEP-2020) EG QP CODE: 20001071

Duration 3hrs. **Marks 60**

General Instructions:
I) Question one is compulsory, solve **any three** from remaining questions.
[l) Figure on right indicate full marks
III) Use First Angle Method of projection.

Q.1 A hexagonal pyramid, base edges 30 mm long and axis 50 mm is resting on H.P. with its axis vertical and two of its faces perpendicular to the V.P. The pyramid is cut by a plane perpendicular to the H.P., inclined to the V.P. by 45 and 10 mm away from the axis of the pyramid and closer to the observer. Draw sectional front view, sectional top view, sectional side view and true shape of the section. **15**

Q.2

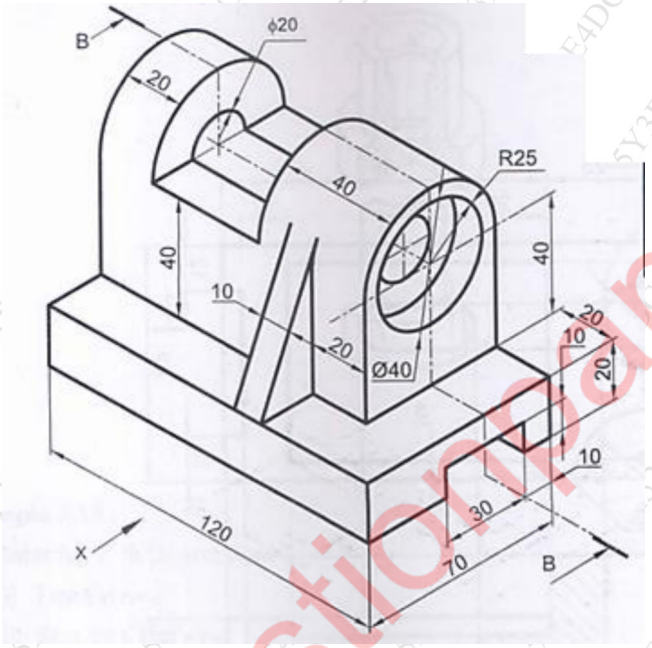


Fig.1

For the given pictorial view in figure fig1 Draw:
(i) Sectional F.V. (Section B-B). **4**
(ii) T.V. **5**
(iii) RHSV. **4**
(iv) Insert at least 10 major dimensions. **2**

Q. 3 a. Draw the isometric view using given F.V. and L.H.S.V. in fig 2 **9**

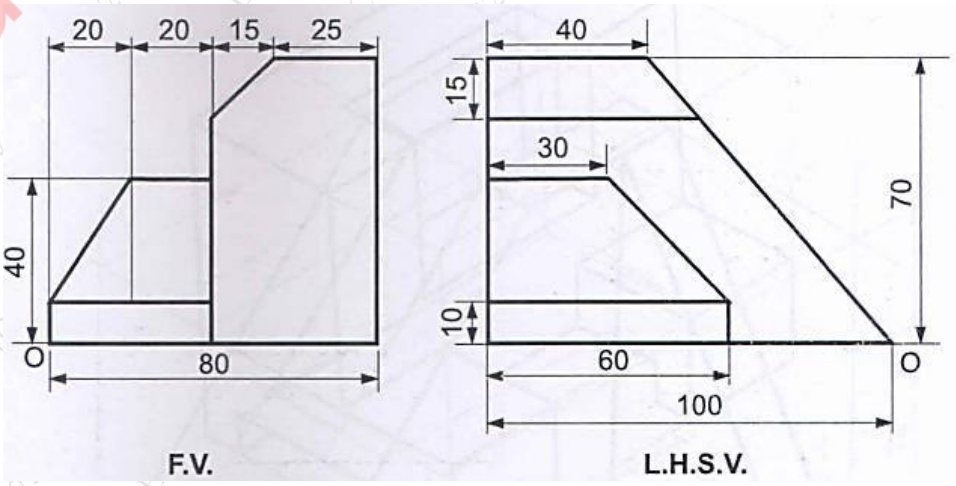


Fig.2

X525Y3E4DC5X525Y3E4DC5X525Y3E4DC5X525Y3E4DC5

b. One end of an inelastic thread of 150 mm length is attached to one comer of a regular hexagonal disc having a side of 25 mm. Draw the curve traced out by the other end of the thread when it is completely wound along the periphery of the disc, keeping it always tight. **6**

Q4 a. The T.V. of line AB measures 60 mm and is inclined at 56^0 to the XY line. Point A is 10 mm above H.P. and 20 mm in front of the V.P. Point B is 45 mm above H.P. and in front of the V.P. Draw the projection of line, find the true length of the line. **6**

b. A square pyramid side of base 40 mm and axis length 60 mm has one of the side of base in the H.P. The axis of solid is inclined to the H.P. at an angle 30° (0) and the T.V. of axis is inclined at an angle 45° with the V.P. raw its projections when the apex is away from the observer. **9**

Q5 a. Draw the projections of a regular hexagon of 25 mm side, having one of its sides in the H.P. and inclined at 60^0 to the V.P., and its surface making an angle of 45^0 with the H.P. **9**

b. Draw the isometric view using the figure fig 3 **6**

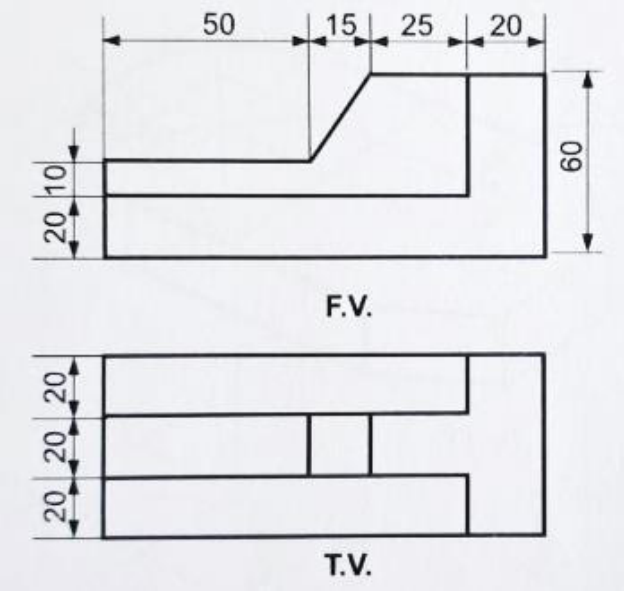


Fig.3

X525Y3E4DC5X525Y3E4DC5X525Y3E4DC5X525Y3E4DC5

Q6 a. A cylinder with 50 mm diameter of its base and axis measuring 70 mm has its axis is inclined to 30° to VP. Draw the projections of the cylinder when the solid is resting on one of the points of the circumference of the base on VP. **6**

b. Fig 4 shows pictorial view of an object.
Draw the following views with first angle method of projection. **4**
(i) Front view. **4**
(ii) Top view. **1**
(iii) Add at least 6 dimensions.

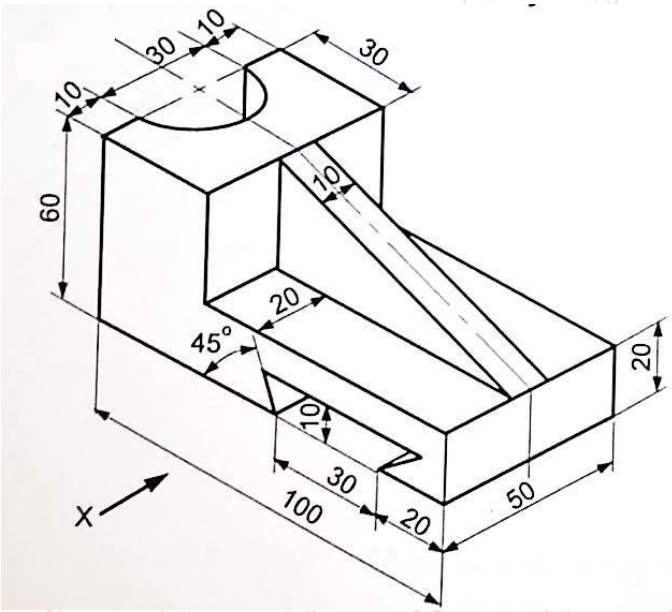


Fig.4

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X525Y3E4DC5X525Y3E4DC5X525Y3E4DC5X525Y3E4DC5