

Instructions to the Students:

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

(Level/CO) Marks

Q. 1 Solve the following.

- A) Construct a regular pentagon of 30 mm side by general method.
 B) Explain the different methods of dimensioning.

Remember 06
 Understand 06

Q.2 Solve Any one of the following.

- A) Draw the elevation, top view and side view of the object shown in figure 1.
 All dimensions are in mm.

Apply 12

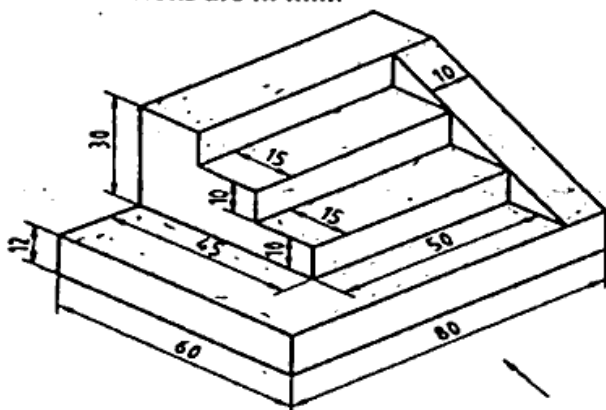


Figure:1

- B) Draw the elevation, top view and side view of the object shown in figure 2. All dimensions are in mm.

Apply 12

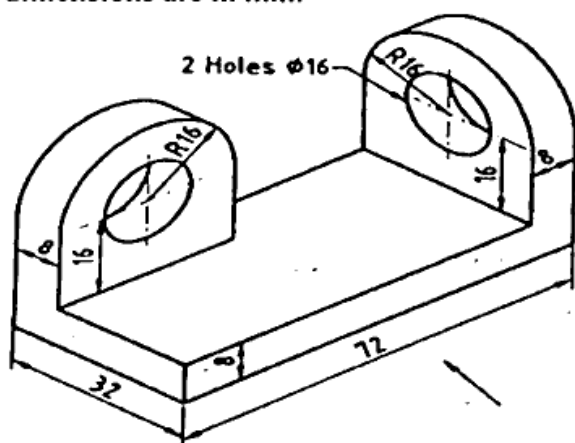
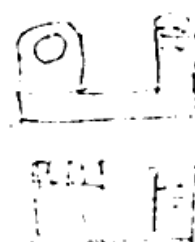


Figure: 2



Q. 3 Solve Any Two of the following.

- A) Line AB is 75 mm long. It's F.V. and T.V. measure 50 mm & 60 mm long respectively. End A is 10 mm above H.P. and 15 mm in front of V.P. Draw projections of line AB if end B is in first quadrant. Find angle with HP and VP.
 B) End A of a line AB is 25 mm below HP and 35 mm behind VP. Line is 30° inclined to HP. There is a point P on AB contained by both HP & VP. Draw projections; find inclination with VP and traces.

Evaluate 06

Evaluate 06

- C) A hexagonal plane has its one side in HP and its opposite parallel side is 25 mm above HP and in VP. Draw its projections. Take side of hexagon 30 mm long.

Evaluate 06

Q.4 Solve Any Two of the following.

- A) A right circular cone, 40 mm base diameter and 60 mm long axis is resting on HP on one point of base circle such that its axis makes 45° inclination with HP and 40° inclination with VP. Draw its projections.
- B) A frustum of regular hexagonal pyramid is standing on its larger base. On HP with one base side perpendicular to VP. Draw its FV & TV. Project its auxiliary TV on an AIP parallel to one of the slant edges showing TL. Base side is 50 mm long, top side is 30 mm long and 50 mm is height of frustum.
- C) A cylinder 40 mm diameter and 50 mm axis is resting on one point of a base circle on VP while its axis makes 45° with VP and FV of the axis 35° with HP. Draw projections..

Evaluate 06

Evaluate 06

Evaluate 06

Q.5 Solve the following.

F.V. and S.V. of an object are given. Draw its isometric view.

Synthesize 12

