

W – 1475

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F.E. (Semester - I) (New) Examination, June - 2014

ENGINEERING GRAPHICS (Revised)

Sub. Code: 59180

Day and Date : Monday, 02-06-2014

Total Marks : 100

Time : 10.00 a.m. to 2.00 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Retain all construction lines.
 - 3) Use both sides of drawing paper.
 - 4) Assume suitable data if necessary.
 - 5) All dimensions are in mm.

SECTION - I

- Q1) a)** Solve any three.
- i) Complete the projections of line CD if its bearing is $S40^{\circ}E$, grade 75% and its top view length is 50mm. [4]
 - ii) Draw the horizontal line JK intersecting AB. Line JK is 60mm long and makes 25° with FRP. [4]
 - iii) Without drawing any additional view, complete the projection of line AB perpendicular to horizontal line BC. [4]
 - iv) Find the angle made by the plane JKL with HRP, FRP. [4]
- b) A square plate of side 60mm is held on a corner on H.P. with a diagonal horizontal and inclined at 45° to V.P. The plate is seen as a rhombus in plan with the other diagonal measuring 30mm. Draw the projections of the plate and determine the angle it makes with H.P. [13]
- Q2)** A square pyramid 50mm side of base and 64mm height is freely suspended from one of its corners of base. Draw its projections when vertical plane containing axis makes an angle of 45° with VP. [13]

P.T.O.

Q3) Solve any two

- a) The major axis of an ellipse is 100mm and the foci are at a distance of 12mm from its ends. Find the minor axis and draw the ellipse by arcs of circle method. [6]
- b) A straight link PQ of 70mm length revolves one complete revolution with uniform motion in anti-clockwise direction about hinged P. During this period an insect moves along the link from P to Q and Q to P with uniform linear motion. Draw the path of the insect and name the curve. [6]
- c) Draw vertical axis parabola in a rectangle 100mm high and 80mm wide. [6]

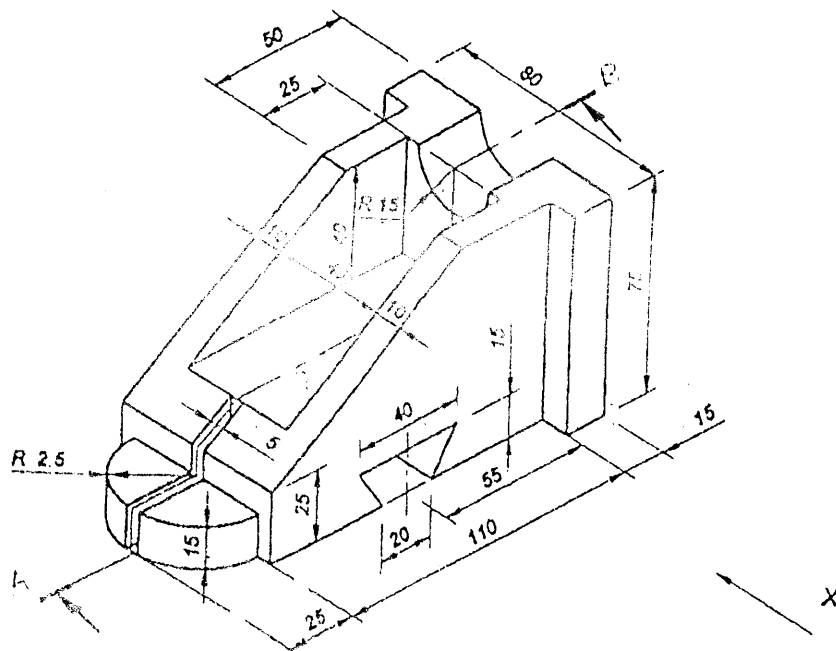
SECTION - II

Q4) Solve.

[24]

The following figure shows a Slit Guide. Draw the following views :

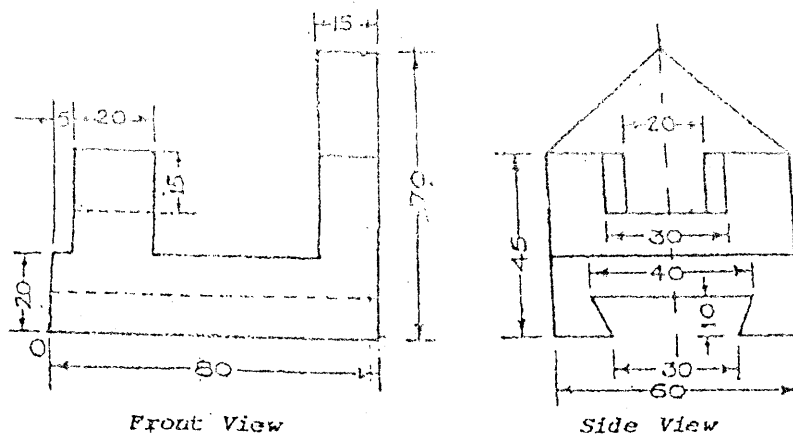
- a) Sectional FV along section AB
- b) TV &
- c) LHSV.



Q5) Solve any one.

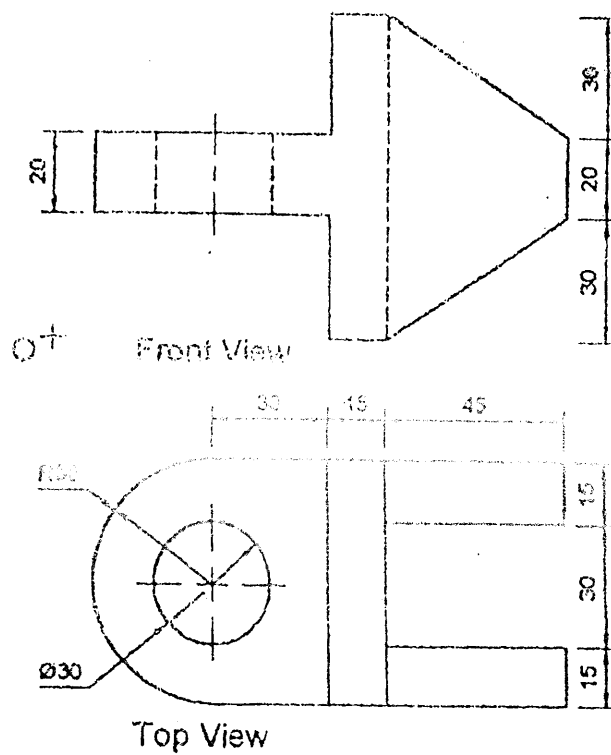
[13]

a) Figure shows the views. Draw its isometric view.



OR

b) Figure shows the views. Draw its isometric view.



Q6) Solve any one.

a) Solve.

- i) A circular cone of base dia. 60mm & axis 70mm stands on HP. It is cut by AIP so that true shape of section is an isosceles triangle having 50 mm base. Draw FV, STV & true shape of section also find inclination of AIP with HP. [7]
- ii) A triangular base prism with base side of 60mm & one side parallel to VP stand on HP. It is cut by a hole of 40mm dia. At center of 90mm axis of prism, such that hole axis is perpendicular to VP. Complete the development of lateral surfaces of prism. [6]

OR

b) Solve.

A cylinder of base diameter 40mm & height 60mm is resting on HP. It is cut by section plane perpendicular to VP, inclined at 45° to HP & passing through the point on the axis 15 mm below the circular top. Draw FV, sectional TV, and true shape of section also development of remaining part of cylinder. [13]

