SC - 8

Seat No.	

Total No. of Pages : 6

F.E. (All Branches) (Semester - I & II) Examination, December - 2019

ENGINEERING GRAPHICS

Sub. Code : 59180

Day and Date : Saturday, 07 - 12 - 2019 **Total Marks : 100**

Time : 02.30 p.m. to 06.30 p.m.

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

SECTION - I

Q1) Solve any two. **[12]**

a) Two points AB are 100 mm a part. A point P moves in such a manner that the difference between the distances of point P from A and B is always 40 mm. Draw the locus of P.

b) Draw the half convolution of Archimedean spiral with minimum radius 25 mm and radial increment of 6 mm for each 30 degree movement.

c) A circle of 50 mm Diameter rolls on horizontal line for half revolution and another half revolution on vertical line. Draw the curve traced out by a point 'P' on top of circumference of circle.

Q2) a) Solve any three. **[12]**

i) Complete the projection of line AB has bearing of S60E, grade of 70%. w.r.t. A & its TVL 70 mm. Ref.fig. (i).

ii) Complete projection of line PQ 35mm long & perpendicular to AB. Ref.fig. (ii).

iii) Complete projection of line CD is parallel to line AB & true length is 50 mm. Ref.fia. (iii).

iv) Find angle made by plane ABC with HP & perimeter of plane ABC. Ref.fig. (iv).

P.T.O

b) Solve. [13]

An isosceles triangle ABC with base AB=42 mm and height 58 mm rests with AB on HP and at 60° to VP with point A 18 mm in front of VP. Complete the projection of triangular plate its surface inclined at 45° to HP

Q3) Solve. [13]

A right circular cylinder with 50 mm dia. & height 70 mm long resting on HP, such that its base is inclined at 30° to HP & top view axis is inclined at 45° to VP. Complete its projections.

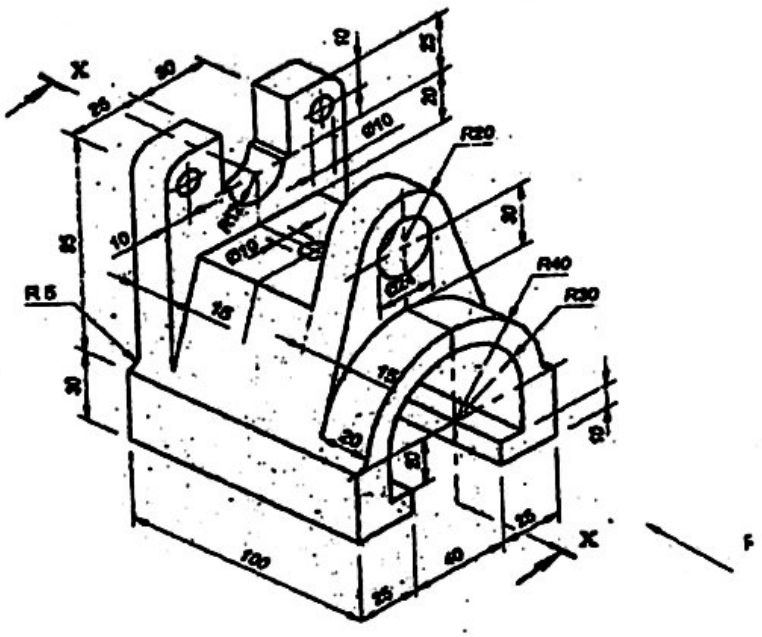
SECTION - II

Q4) Draw the following views of the figure shown, [24]

a) Front view along direction F

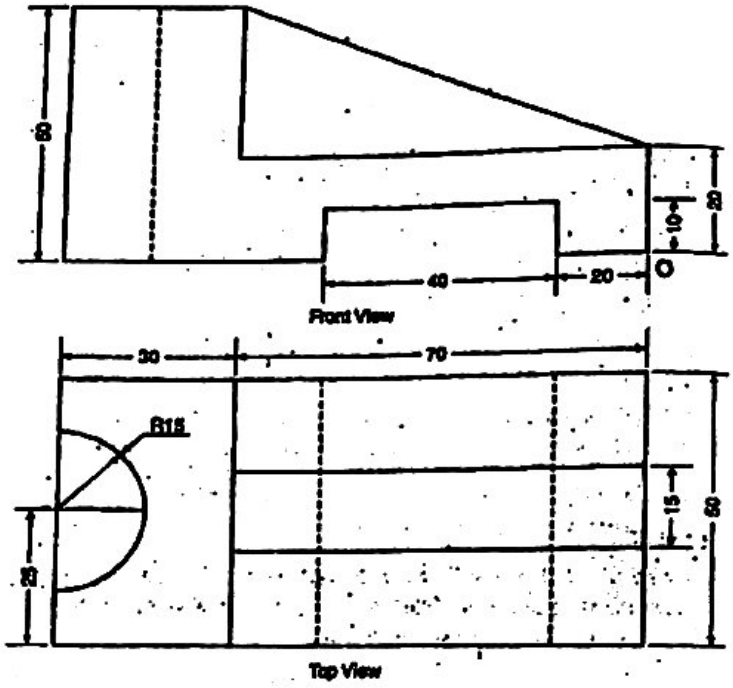
b) Top View

c) Sectional left hand side view along X-X

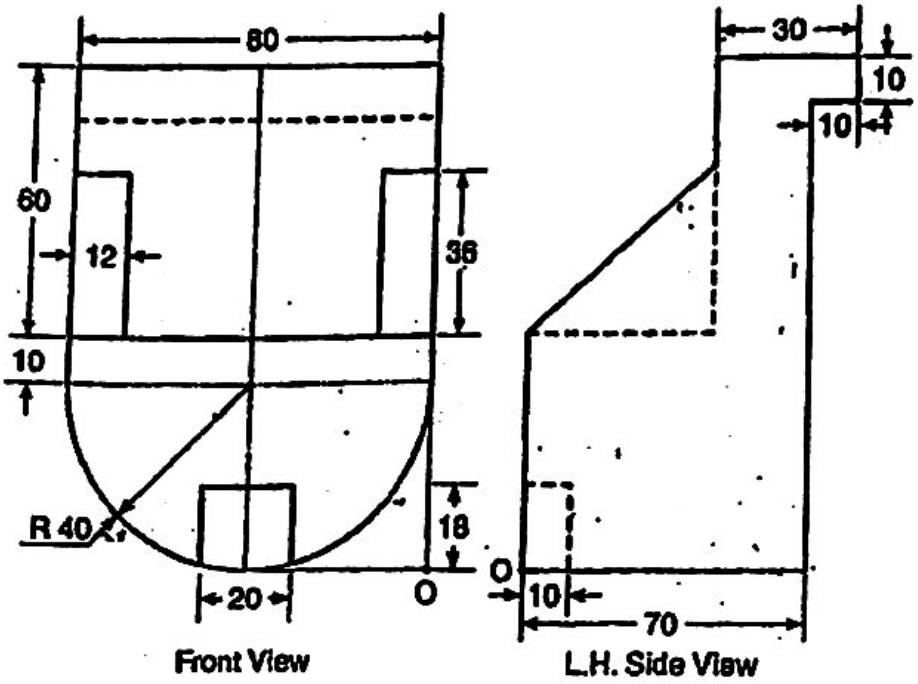


Q5) Solve any one. **[13]**

a) Figure show the views, Draw its isometric view.



b) Figure shows the views, Draw its isometric view



Q6) Solve any one. **[13]**

a) i) A square pyramid with 40 mm base side and 60 mm height rests on the HP with its base edges at 45° to VP. It is cut by a plane which is inclined to HP by 30°and perpendicular to VP. This section plane passes through the center of the axis. Draw FV and sectional TV and true shape of section. **[7]**

ii) A hexagonal based pyramid with base side 25 mm and height 50 mm rests on HP with two opposite sides parallel to VP. The pyramid is cut by a section plane at 45° to HP and passing through its extreme LHS corner. Draw the development of remaining pyramid after section. **[6]**

OR

b) A cylinder, 30 mm diameter and 50 mm long stands vertically on its circular base. It is cut by an A.I.P. inclined 45° to HP which bisects an axis of a cylinder. Draw the sectional TV, FV, true shape of section. Also show the development of lateral surface of truncated cylinder.