

Seat No.	
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F.E. (Part - I) (Semester - I) (Revised) Examination, May - 2017

ENGINEERING GRAPHICS

Sub. Code : 59180

Day and Date : Tuesday, 16 - 05 - 2017

Total Marks : 100

Time : 09.00 a.m. to 01.00 p.m.

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

SECTION - I

Q1) Solve any two. [12]

- a) A thread of length 150mm is wound around a circle of 40mm diameter. Trace the path of end point of thread.
- b) A circle of 50mm Diameter rolls on horizontal line for half revolution clockwise and then on a line inclined at 60° to horizontal for another half revolution. Draw the curve traced out by a point 'P' on top of circumference of circle.
- c) The two fixed points F1 & F2 is 100 mm apart. Trace the path of point P moving in same plane in such way that the sum of its distance from F1 & F2 is same & always equal to 125 mm. Trace the curve by point P.

Q2) A) Solve any three. [12]

- a) Complete the projections of line AB having its FVL is 50mm, bearing of N60W & grade of 60%. wr.t. A. (Ref. Fig. I a)
- b) Complete projections of frontal line KM which is 35 mm long & slopes up 1:2 w. r. t. K, Point K is lies on line AB. (Ref. Fig. 1 b)
- c) Line RS is parallel to AB and Q is midpoint of line AB. Complete the projections of line RS if true length of AB is 40 mm. (Ref. Fig. 1 c)
- d) Find angle made by plane PQR with HP & perimeter of plane PQR. (Ref. Fig. I d)

P.T.O.

B) Solve.

[13]

A circular plate of 60 mm diameter is resting on HP at point A on its rim with its surface inclined at 30° to HP & diameter AB through A is inclined at 45° to VP. Draw projection of circular plate.

Q3) Solve.

[13]

A pentagonal pyramid with base side 30mm & axis height 70mm rest on HP on its base side resting on HP. Such that the triangular face containing that base side is inclined at 30° to HP & axis is inclined 45° to VP. Complete the projections of pyramid.

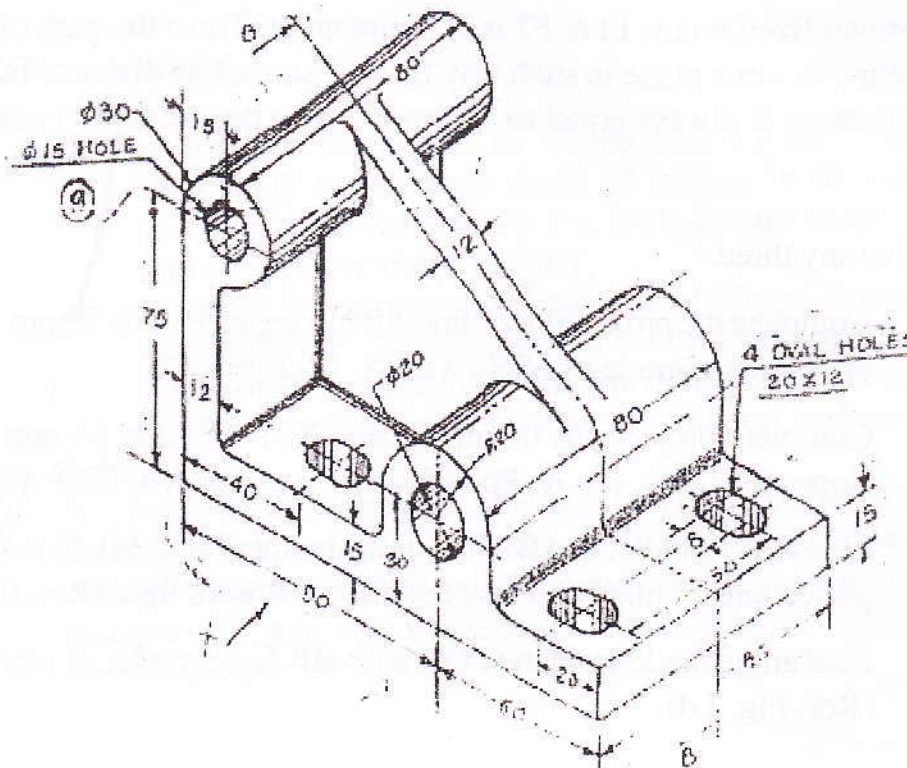
SECTION - II

Q4) Solve

[24]

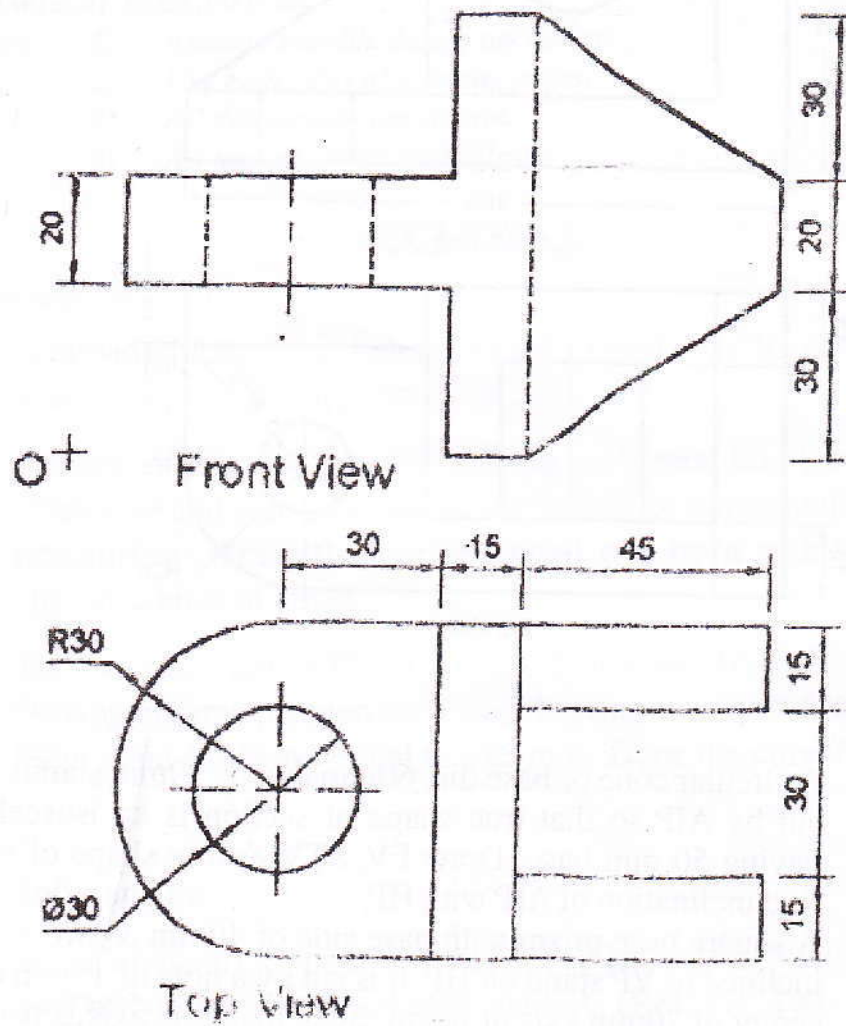
The following figure shows a Bracket. Draw the following views.

- Sectional FV along section BB
- TV &
- RHSV



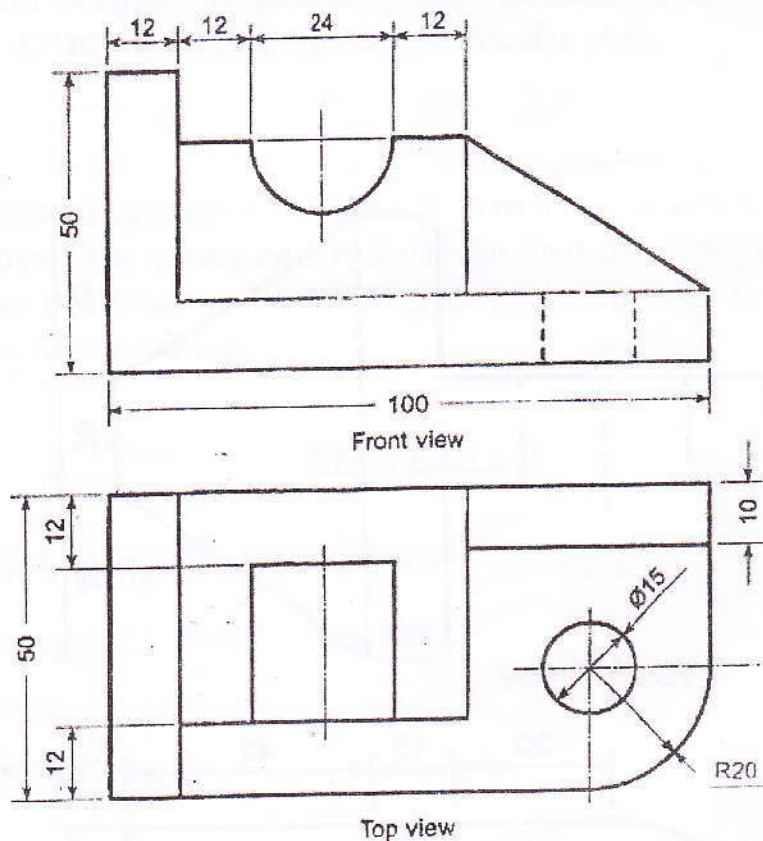
Q5) Solve any one

- 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.

[13]

- 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 square base prism with base side of 40mm & two sides equally inclined to VP stand on HP. It is cut by a hole of 15mm diameter at center of 70mm axis of prism. Such that hole axis is perpendicular to VP. Complete the development of lateral surfaces of prism. [6]

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 55° 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.

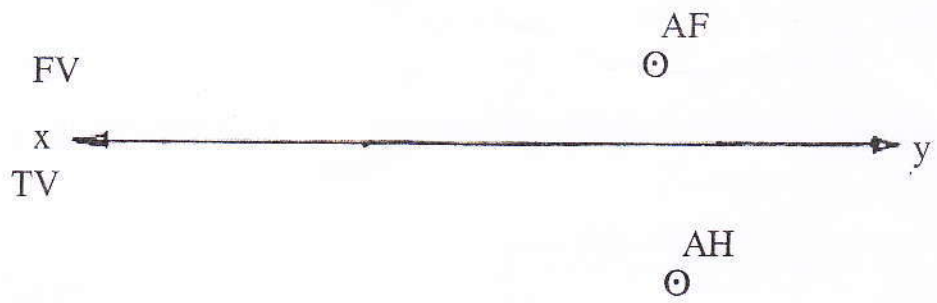


Fig 1.a

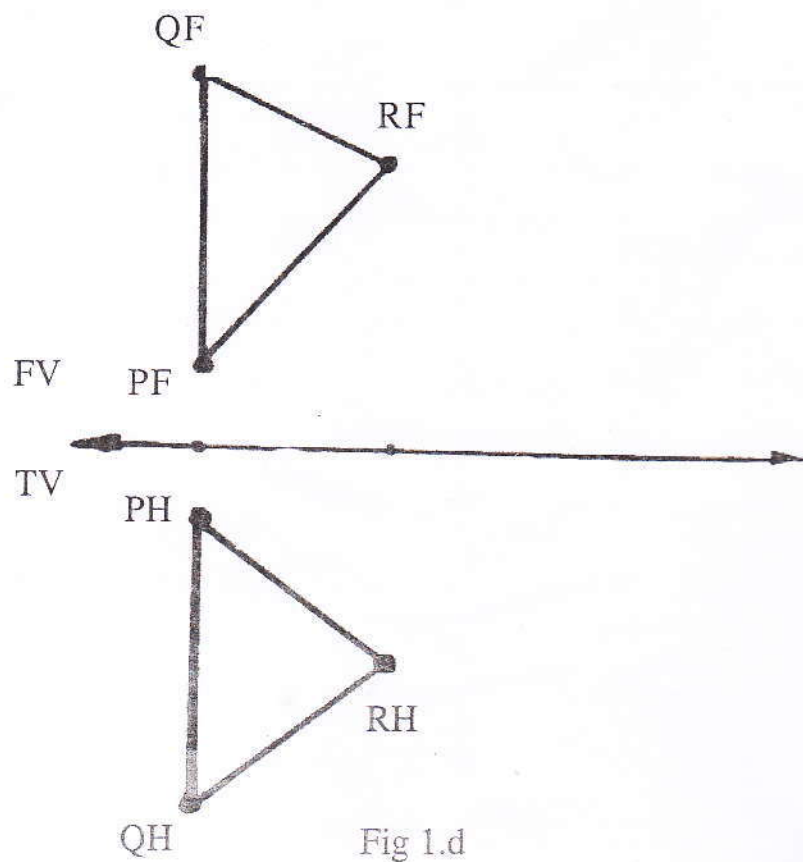


Fig 1.d

