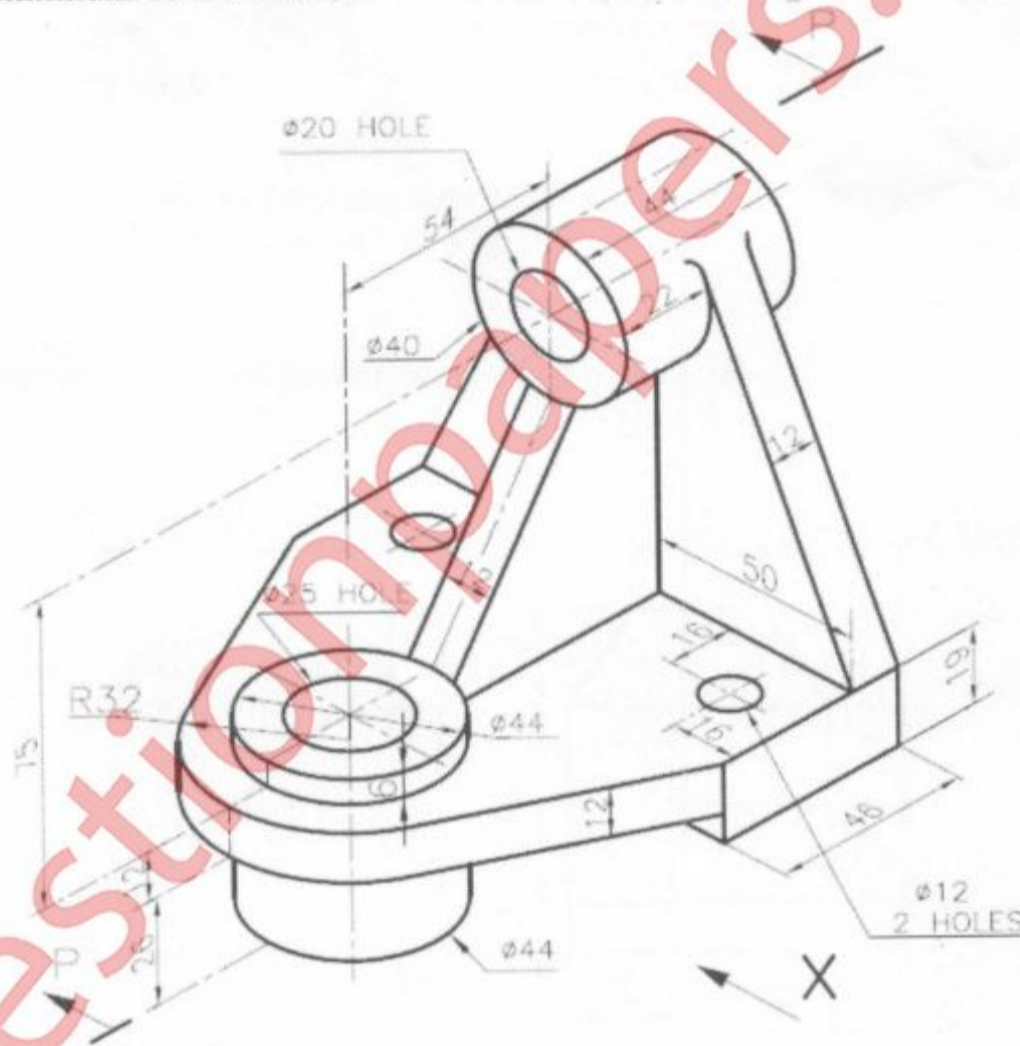**(3 HOURS)** Max Marks:60

1) Answer any **FOUR** questions.
2) Use **first** angle projection method **only**.
3) Assume any suitable dimension if required.

Q1   Figure given below shows two views of an object. Draw the following views to
      full scale.:-
      i) Sectional Front view section P-P   05
      ii) Top View   04
      iii) Left hand Side view   04
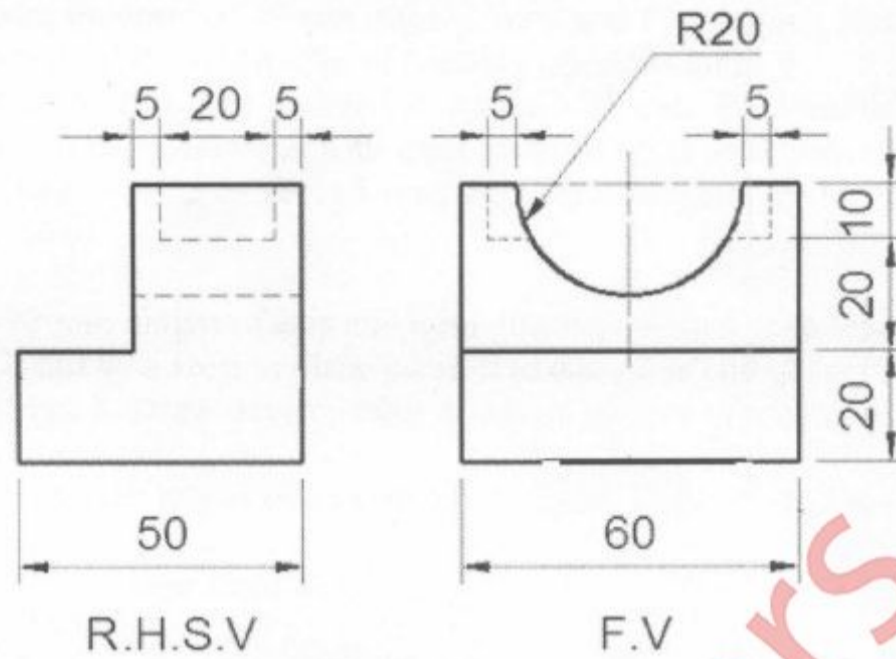   iv) Insert minimum 10 dimensions   02

Q2   A tetrahedron of 70 mm sides has one of its edges in H.P. and inclined at 45° to   15
      the V.P. while a face containing that edge is vertical. Draw projections of the
      tetrahedron.

[TURN OVER

1

Q3 a) Draw the isometric view of the following using the natural scale   08
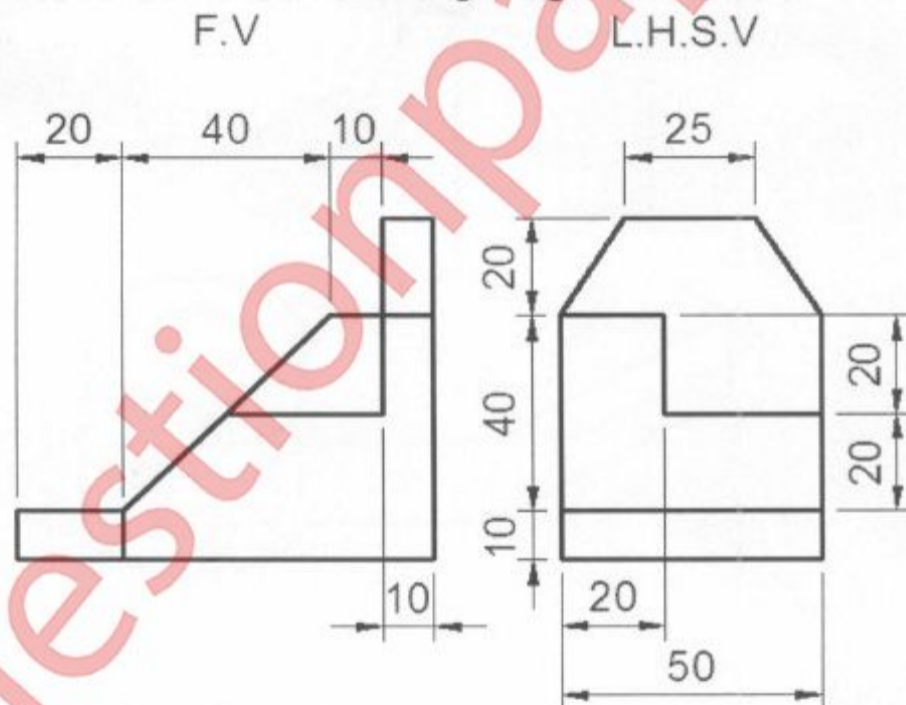

R.H.S.V   F.V

b) A triangular prism base 40 mm long and height of axis 65 mm has one of its base   07
edges in H.P. and inclined at 40° to V.P. Draw projections when the axis is
inclined at 45° to H.P.

Q4 a) Draw the isometric view of the following using the natural scale   07

F.V   L.H.S.V

b) A line AB 70 mm long has its end A 10mm above H.P. and 20 mm in front of   08
V.P. The line AB is inclined at 40° to H.P. and its front view is inclined at 65° to
XY. Draw its projections and find inclination of AB with VP.

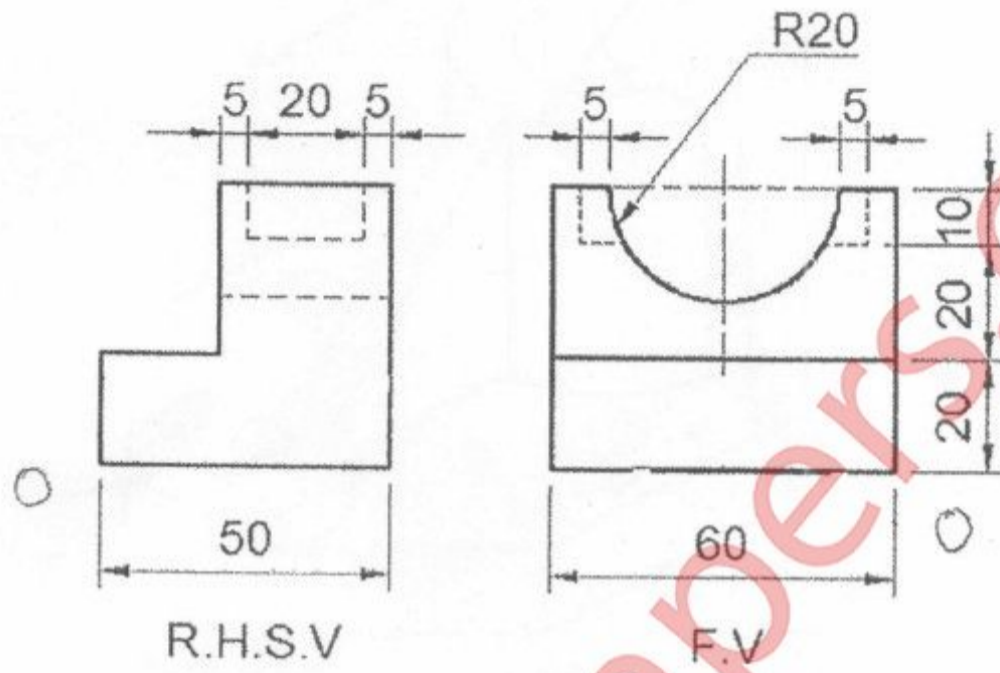[TURN OVER

Q5 a) A pentagonal pyramid of 40 mm edge of base and 70 mm high stands vertically   08
        with its base on H.P. and an edge of base is perpendicular to V.P. A section plane
        perpendicular to H.P. and inclined at 30° to V.P. cuts the pyramid such that it
        passes through the pyramid at a shortest distance of 12 mm from the axis and in
        front of it. Draw sectional Front View, Top View showing the section   and true
        shape of section.

    b) A cone of 70 mm height of axis and base diameter 60 mm is resting on its base   07
        on H.P. It is cut by a section plane parallel to one of its end generators and 12
        mm away from it. Draw development of lateral surface of truncated solid.

Q6 a) Figure given below shows two views of an object. Draw the following views to
        full scale.:-
        i)   Front View from X   4
        ii)   Top View   4
        iii)   Insert minimum 6 dimensions   1
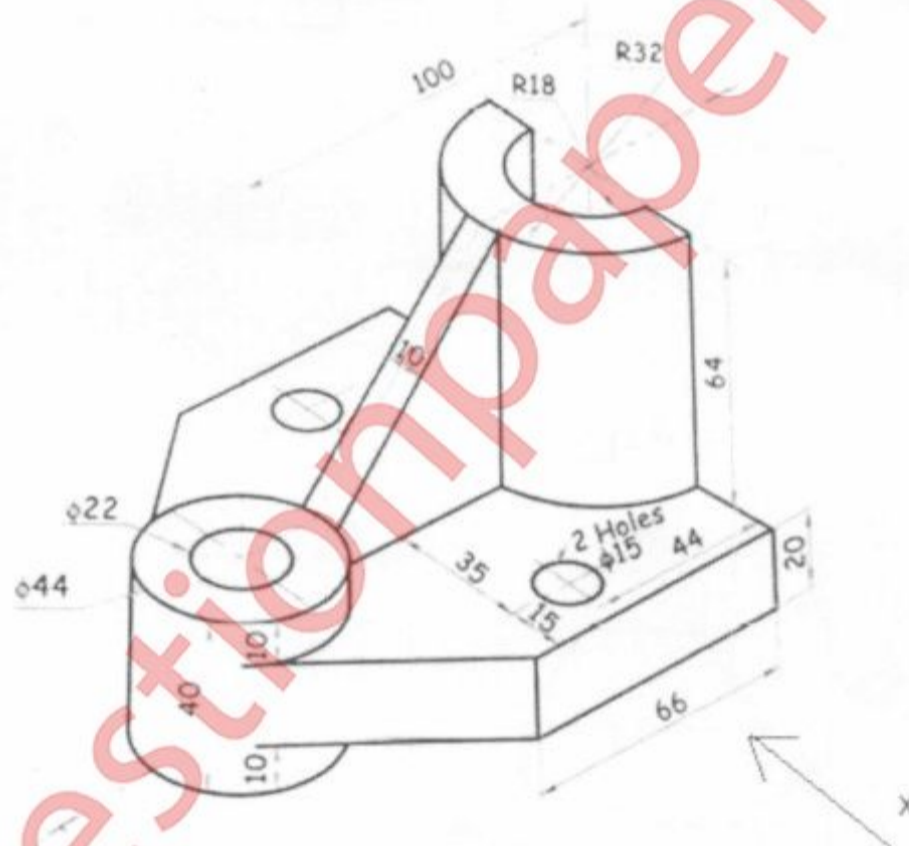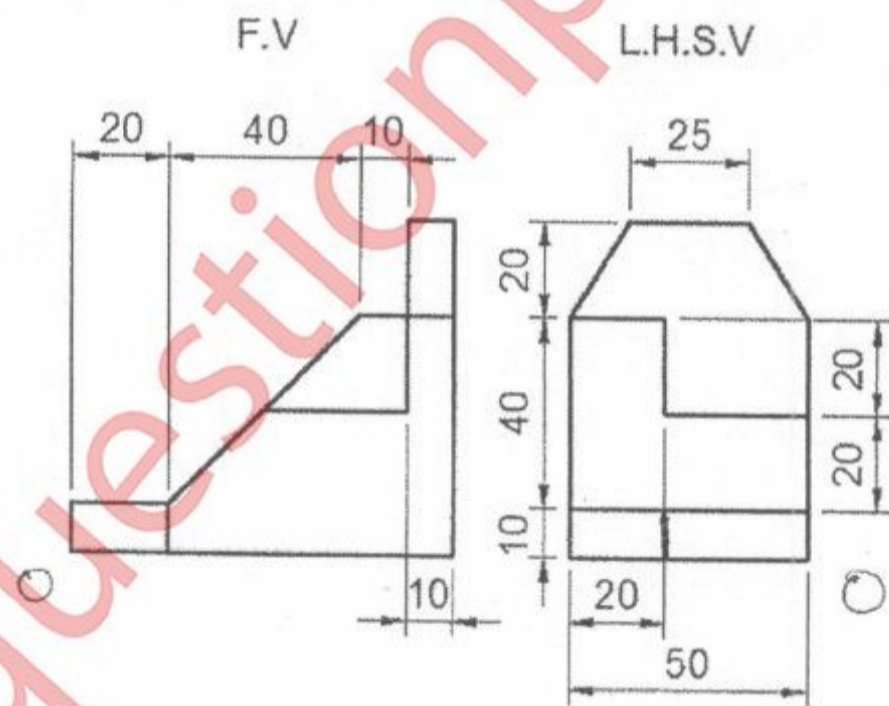

    b) One end of an inelastic thread of 150 mm length is attached to one corner of a   6
        regular hexagonal disc having a side of 25 mm. Draw the curve traced out by the
        other end of the thread when it is completely wound along the periphery of the
        disc, keeping the thread always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

Q.3 (a)

R20

5 20 5

5   5

10

20

20

50

60

R.H.S.V

F.V

Q.4 (a)

F.V

L.H.S.V

20   40   10

25

20

20

40

20

10

10

20

50

Q.6 (a)