

GREENLAWNS HIGH SCHOOL

PRELIMINARY EXAMINATION YEAR 2025 - 2026

SUBJECT : TECHNICAL DRAWING APPLICATIONS

CLASS : X

TIME : 3 HOURS

MARKS : 100

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Instruction

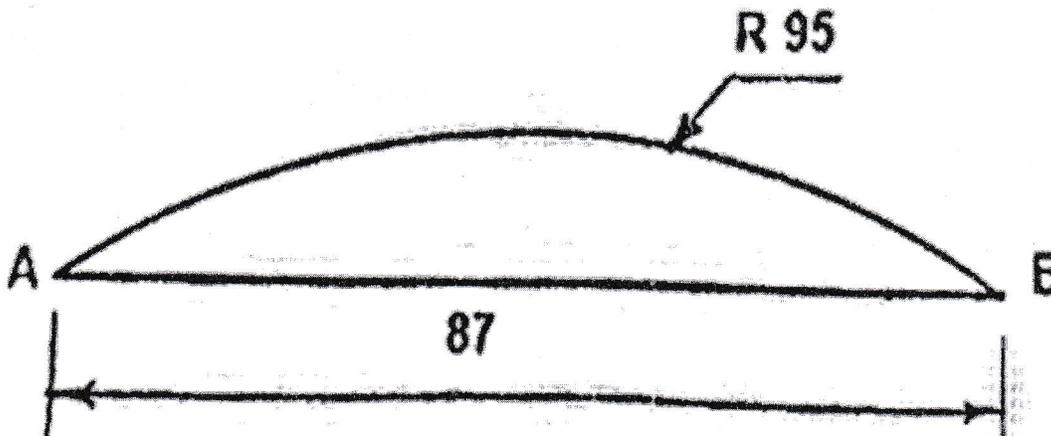
- You must attempt three questions from Section A and two questions from Section B.
- Each Section must be answered on separate sheet.
- All construction lines must be shown.
- All dimensions are in mm.
- The intended marks for questions are given in brackets.

SECTION A (48 Marks)  
(Attempt any 3)

Q.1 On a map a line of 6cm was marked as 1.2m. Find the R.F. Using this R.F. (16)  
Construct a scale long enough to measure 3.6 metres. Using this R.F. draw a  
Triangle of sides 1.86 m, 2.02 m, and 1.05 m. Take the largest side as the base.  
Construct an isosceles triangle of area equal to the area of the above triangle.

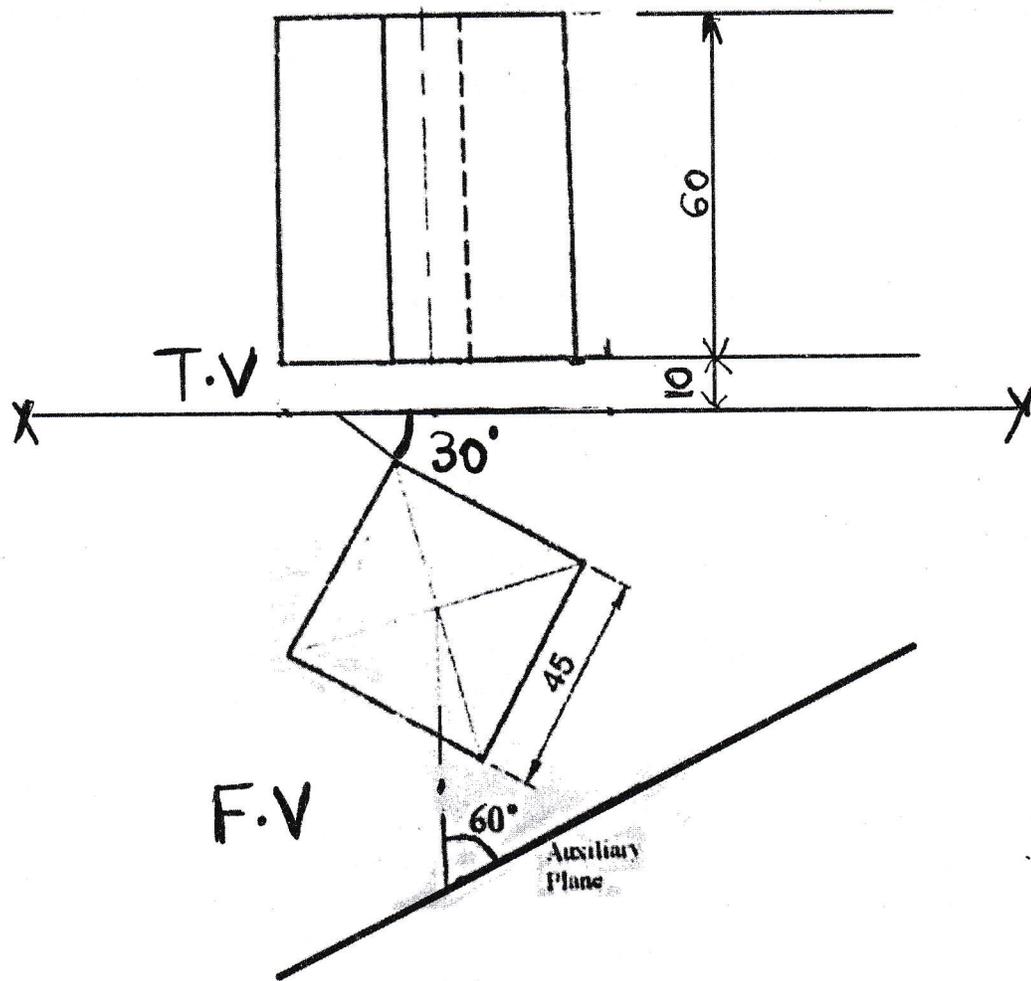
Q.2a) Construct an Ellipse by CONCENTRIC CIRCLE method. (10)  
Given Base length = 150mm and Minor axis = 100mm.

b) Refer Figure (1) .An arc of radius 95 mm is passing through points A and B. (6)  
given AB = 87 mm. Copy the given figure. Find the length of the given arc by  
geometrical means. Measure and record its length in 5mm guidelines.



Figure(1)

- Q.3a) Figure(2) below shows two views of a square prism with axis perpendicular to vertical plane and parallel to horizontal plane in Third Angle Method. (10)  
Draw the Auxiliary Front view when the axis is inclined at  $60^\circ$  to V.P. One side of Square is inclined at  $30^\circ$  to H.P. Side of base = 45mm, Axis height = 60mm.



Figure(2)

- b) Construct a Hexagon of side 65 mm. Inscribe 3 circles inside the hexagon such that each circle touches one side of the hexagon and two other circles. (6)

Q.4 Refer Figure (3) . Copy the given template ( Insert any six dimensions) .

(16)

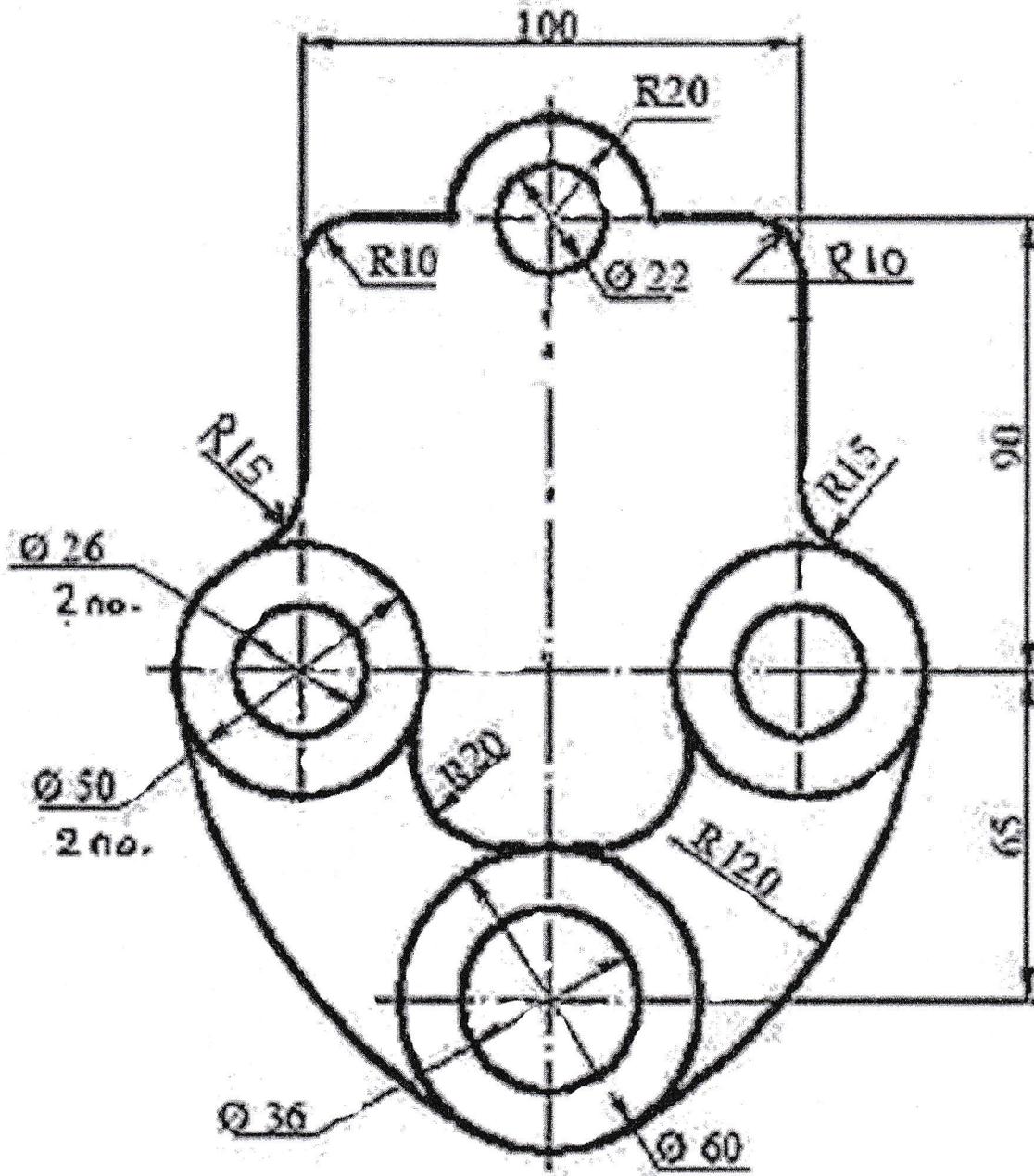
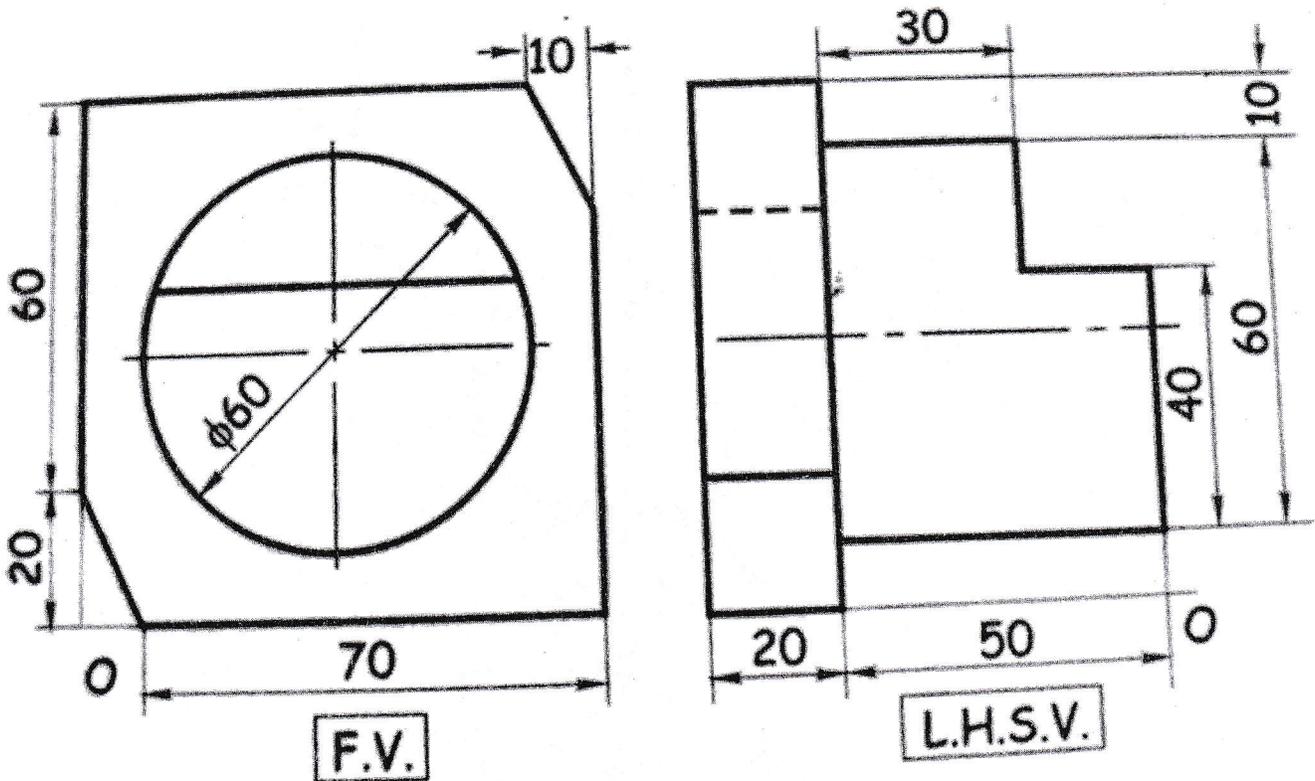


Figure (3)

Q.5 Refer Figure (4). It shows F.V and L.H.S.V of an object .Draw the oblique view when the receding axis is inclined at  $45^\circ$  to the horizontal. ( Do not insert any dimensions)



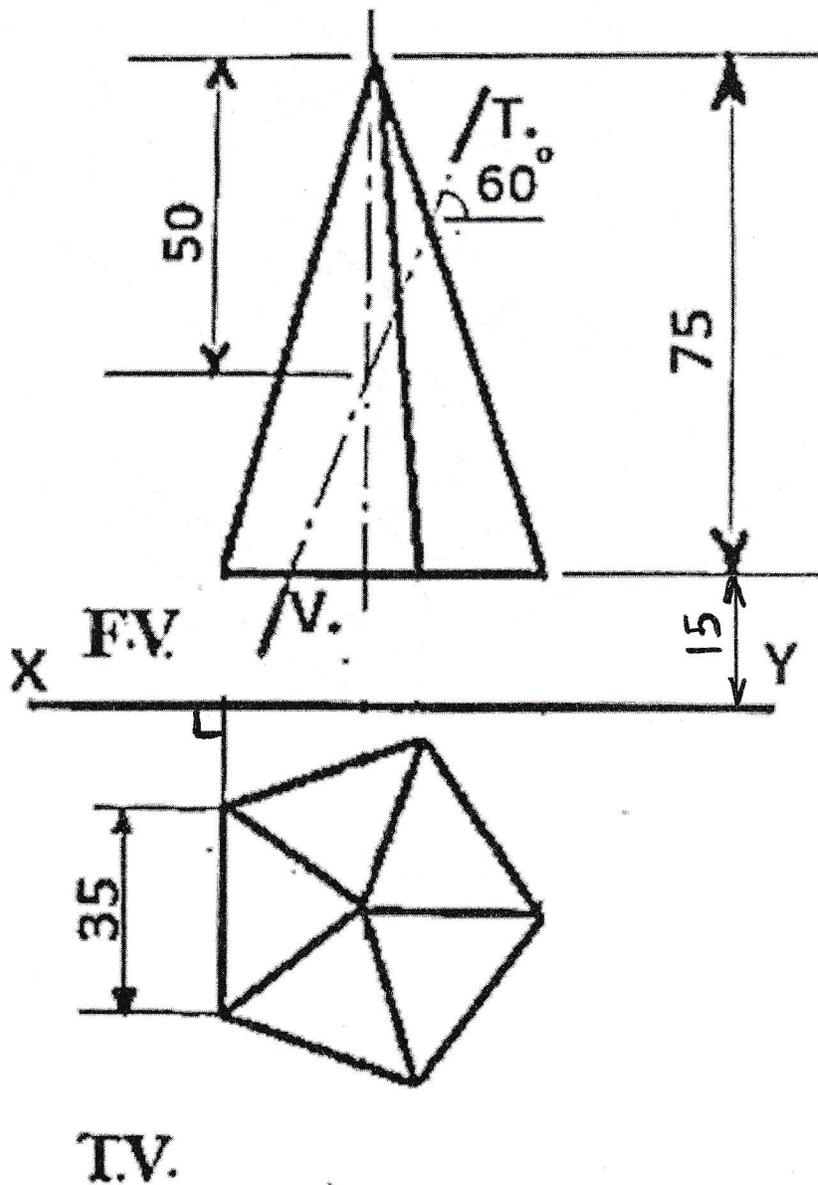
Figure(4)

SECTION B (52 Marks)

(Attempt any two questions)

Q.6 Refer Figure(5).It shows a pentagonal pyramid. It is cut by a cutting plane inclined at  $60^\circ$  to the H.P. and perpendicular to the V.P. Given Side of Base = 35 mm and axis height = 75mm. Draw the

- i) Front View (2)
- ii) Sectional Top View (6)
- iii) Sectional L.H.S.V (6)
- iii) True Shape (6)
- iv) Development of the retained portion (6)



Figure(5)



Q.8 Refer Figure(7). It shows two views of a machine part. Draw in First angle method of projection (26)

- a) Front View (8)
- b) Top View (8)
- c) Sectional Right hand side view along R-S (8)
- (Insert any six dimensions) (2)

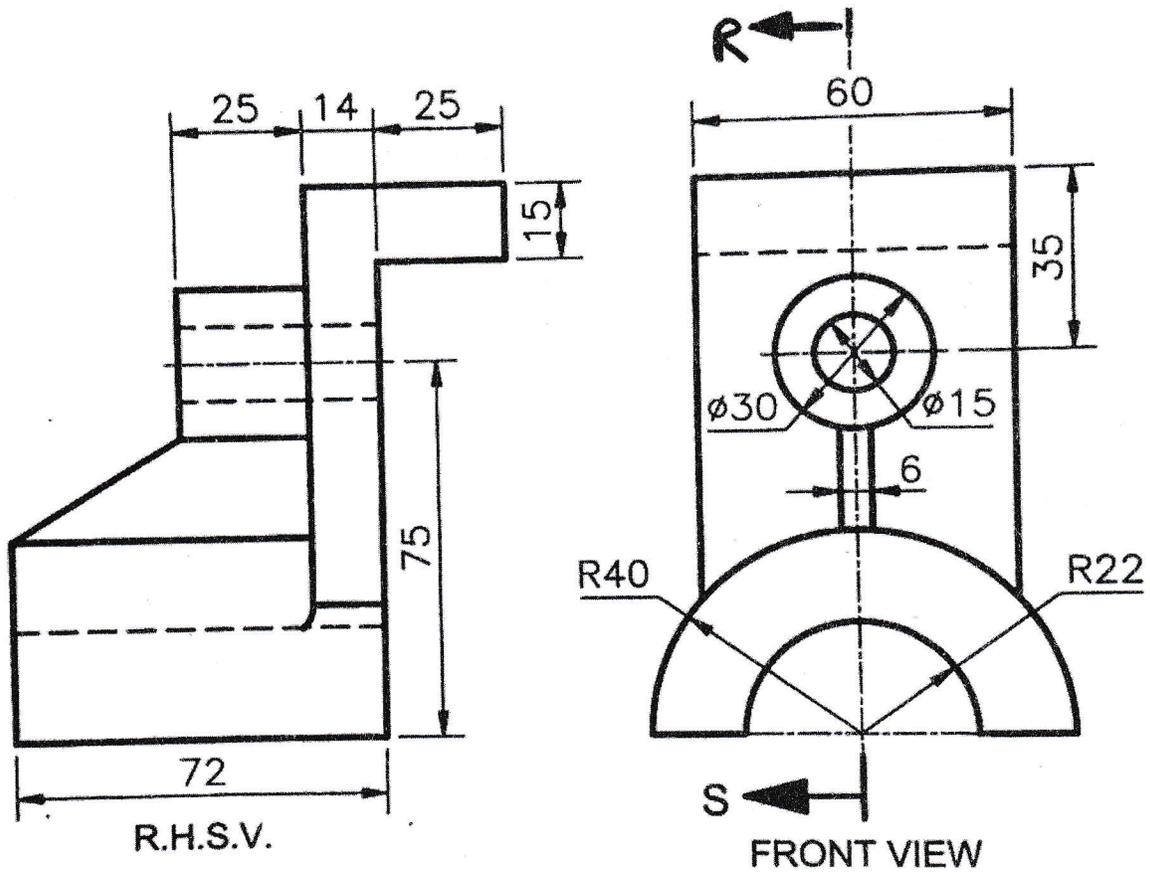


Figure (7)