

GREENLAWNS HIGH SCHOOL
TERMINAL EXAMINATION 2023-24
TECHNICAL DRAWING APPLICATIONS

TIME : 3 HOURS

CLASS : IX
MARKS : 100

Instructions:

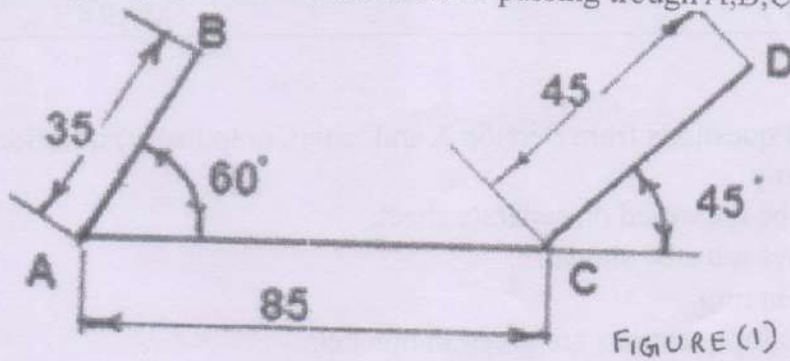
- You must attempt 4 questions from Section A and one(Compulsory) question from Section B compulsory
- Each Section must be answered on separate sheet.
- All construction lines must be shown.
- All dimensions are in mm.
- The intended marks for questions are given in brackets.

SECTION A (80Marks)
(Attempt any 4)

- Q.1a) Construct a hexagon of side 35mm. Draw 6 circles outside the hexagon such that each circle touches one side of the hexagon and two other circles (12)
- b) Draw a square of side 80mm. Inscribe an octagon inside the square whose distance across flat is the same as the side of the square. Measure the side of the octagon (8)
- Q.2a) Construct transverse common tangents to two circles of radii 35mm each and distance between their centres 135mm. Measure and record the length of the tangent (10)
- b) Construct a five-pointed star inside a circle of radii 55mm. (Use proper construction) (use only compass and ruler) (10)
- Q.3a) Construct a pentagon of side 40mm. On the same base but on the opposite side construct a Hexagon. (10)
- b) Draw a circle of radius 28mm. Divide the circle into 12 equal parts. Find the Circumference of a circle of radii 40mm. Measure and record its length. (10)
- Q.4a) Draw a Circle of radii 55mm. Draw six circles inside the circle such that each circle touches the circle of radii 55mm and touch each other. (14)
- b) Draw a circle of radius 30mm with center 'O'. Take a point P such that $OP = 75\text{mm}$. Draw two tangents to the circle from point 'P'. (6)

p.t.o

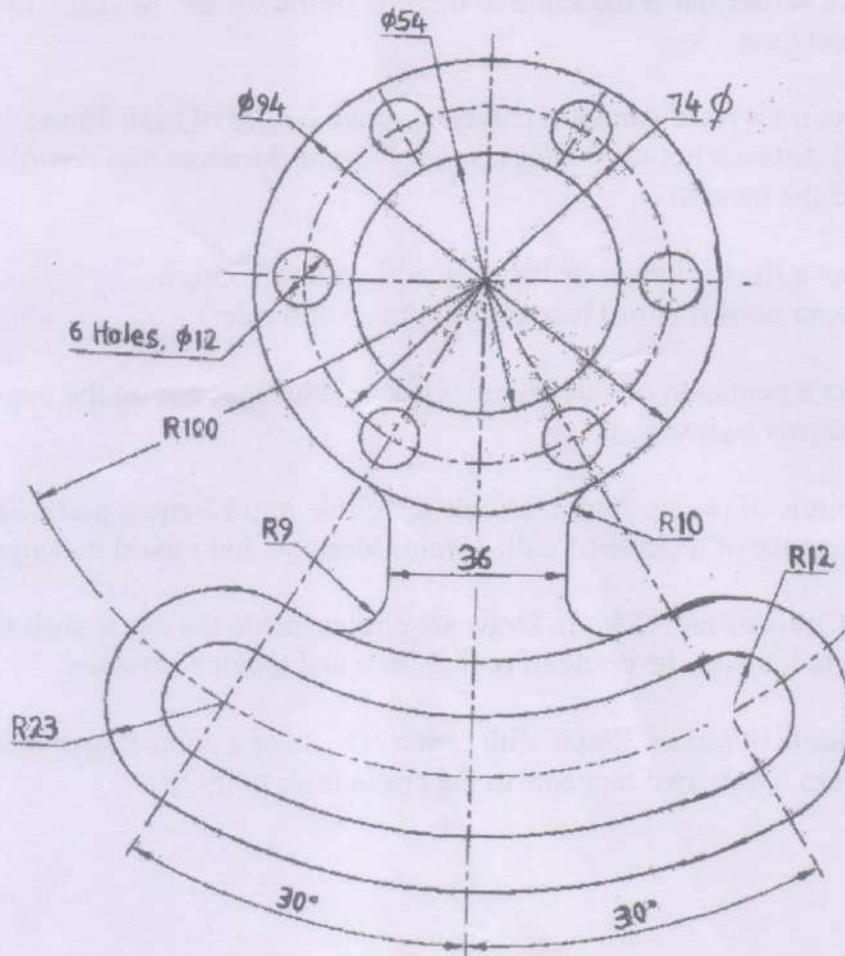
Q.5a) Refer Figure (1). Draw a smooth curve passing through A, B, C, D. (10)



b) Construct a Triangle PQR of Perimeter 135mm and sides PQ:QR:RP are in the ratio of 3:5:4. Take the largest side as the base. Mention the length of each side of the triangle. (10)

SECTION B (20 Marks)
(Q6 compulsory)

Q.6 - Refer Figure (2). Copy the given figure. Insert any six dimensions. (20)



Figure(2)