

SSLC EXAMINATION, MARCH - 2026

MATHEMATICS

(English)

Time : 2½ Hours

Total Score : 80

Instructions :

- Use the first 15 minutes to read the questions and think about the answer.
- There are 27 questions, split into five Sections A, B, C, D, E.
- Answer **all** questions, but in questions of type A or B, you need to answer only one of those.
- You can answer the questions in any order, write the correct question number.
- Trigonometric tables are given at the end and can be used wherever necessary.
- Answer must be explained, wherever necessary.
- No need to simplify irrationals like $\sqrt{2}$, $\sqrt{3}$, π , etc. Using approximations unless you are asked to do so.

SECTION - A

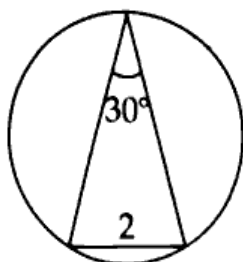
Score

This section has 8 questions of 1 Score each. Select the correct answer from those given.

1. In which of the arithmetic sequences given below, 37 is a term ? 1
(a) 4, 9, 14, ... (b) 7, 12, 17, ... (c) 8, 12, 16, ... (d) 7, 11, 15, ...
2. Curved surface area of a cone is 60 square centimetres. What is the curved surface area of another cone with same radius but slant height is one third of this cone ? 1
(a) 45 square centimetres (b) 60 square centimetres
(c) 30 square centimetres (d) 20 square centimetres
3. Which of the following is a point on the y-axis ? 1
(a) (2, 0) (b) (0, 2) (c) (1, 5) (d) (5, 1)
4. Weight of 7 students are given below. What is the median score ? 1
44, 42, 40, 47, 41, 38, 45
(a) 42 (b) 41 (c) 38 (d) 40
5. Which of the following is the algebraic form of the arithmetic sequence 6, 10, 14, ... ? 1
(a) $4n + 1$ (b) $6n + 4$ (c) $5n + 1$ (d) $4n + 2$

P.T.O.

6. ✓

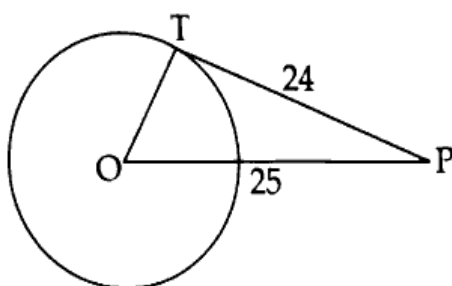


What is the diameter of the circle in the figure ?

1

- (a) $2\sqrt{3}$ centimetres (b) 4 centimetres
(c) 3 centimetres (d) $4\sqrt{3}$ centimetres

7. ✓



Consider the above figure and read the following statements.

1

Statement 1: The length of the tangent drawn from the point P to the circle is 24 centimetres. If OP is 25 centimetres, then the radius of the circle is 7 centimetres.

Statement 2: A tangent to a circle is perpendicular to the radius through the point of contact.

Now choose the **correct** answer from those given below.

- (a) **Statement 1** is true, **statement 2** is false
(b) **Statement 1** is false, **statement 2** is true
(c) Both **statements** are true, **statement 2** is the reason of **statement 1**
(d) Both **statements** are true, **statement 2** is not the reason of **statement 1**

8. The coordinates of two points of a line are (3, 1) and (5, 2) :

1

Read the following statements.

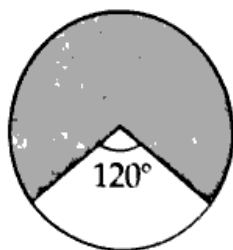
- (i) Slope of the line is 2
(ii) Slope of the line is $\frac{1}{2}$
(iii) (9, 4) is a point on this line.
(iv) (4, 9) is a point on this line.

Now choose the **correct** answer from those given below.

- (a) (i) and (iii) are true (b) (ii) and (iv) are true
(c) (ii) and (iii) are true (d) (i) and (iv) are true

SECTION - B

9. In the figure, a sector of the circle with central angle 120° is given. If a dot is put in the circle, without looking, what is the probability that the dot is in the shaded region? 2



10. (A) A person is asked to say a three digit number.
- (i) What is the probability that all the three digits of this number are the same? 1
 - (ii) What is the probability that it is a multiple of 5, which is less than 200? 2

OR

- (B) A box contains four slips numbered 1, 3, 5, 7 and another box contains three slips numbered 2, 4, 6. If one slip is drawn from each box.
- (i) What is the probability that the product of the numbers being a prime? 2
 - (ii) What is the probability that the product of the numbers is a multiple of 7? 1

11. 7th term of an arithmetic sequence is 100 and 11th term is 140.
- (i) What is fifteenth term of this sequence? 1
 - (ii) What is the third term of this sequence? 1

12. (A) The sum of first 3 terms of an arithmetic sequence is 30 and the sum of first 7 terms is 140.
- (i) What is the second term of this sequence? 1
 - (ii) What is the fourth term of this sequence? 1
 - (iii) Write the first three terms of this sequence. 2
- (B) Sum of first and 25th terms of an arithmetic sequence is 70.
- (i) What is the sum of 4th and 22nd terms of this sequence? 1
 - (ii) What is the 13th term of this sequence? 1
 - (iii) Find the sum of first 25 terms of this sequence. 2

13. The table below gives 45 students, classified according to their scores obtained in an examination.

Scores	Number of students
30 - 40	5
40 - 50	6
50 - 60	8
60 - 70	10
70 - 80	9
80 - 90	7
Total	45

They are lined up according to their scores.

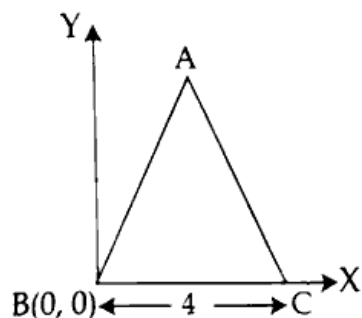
- The score of the student at which position is taken as the median? 1
- According to the assumptions used to calculate the median, what is the score of the 20th student? 2
- Calculate the median score. 2

SECTION - C

14. A circle is drawn with the line joining the points (4, 3) and (8, 5) as diameter.

- What are the coordinates of the centre of the circle? 1
- If (5, 2) is a point on one end of another diameter, what are the coordinates of the other end of that diameter? 2

15. In the figure, triangle ABC is equilateral.



- What are the coordinates of C? 1
- Calculate the height from A to BC. 1
- What are the coordinates of A? 1

16. (A) A circle is drawn with line joining the points (3, 5) and (5, 9) as diameter.

- What are the coordinates of the centre of the circle? 1
- What is its radius? 1
- Write the equation of the circle. 2

OR

- (B)
 - Find the slope of the line passing through the points (3, 5) and (9, 7). 1
 - Write the equation of the line. 2
 - Write the coordinates of any other point on this line. 1

SECTION - D

17. (A) One side of a rectangle is 30 metre longer than the other and its area is 351 square metres.

- (i) Write the above information as a second degree equation. 1
 (ii) Calculate the length of the shorter side. 2

OR

(B) Find two numbers with sum 4 and product 2. 3

18. (i) Write the sequence of natural numbers which leaves a remainder 1 on division by 4. 1

(ii) Is this an arithmetic sequence? Why? 1

(iii) Write the algebraic form of the arithmetic sequence got by adding 2 to each term of the above sequence. 2

19. (A) Sum of first n terms of an arithmetic sequence is $n^2 + 6n$.

(i) What is the sum of first 7 terms? 1

(ii) How many terms of this sequence, starting from the first, must be added to get 315? https: 3

OR

(B) 5, 11, 17, ... is an arithmetic sequence.

(i) Write the algebraic form of this sequence. 1

(ii) Calculate the sum of first 15 terms of this sequence. 2

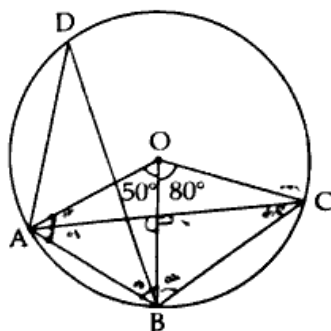
(iii) Write the sum of first n terms of this sequence. 1

20. (i) Write the polynomial $x^2 - 12x + 32$ as the product of two first degree polynomials. 3

(ii) For what values of x , the polynomial $x^2 - 12x + 32$ becomes zero? 1

SECTION - E

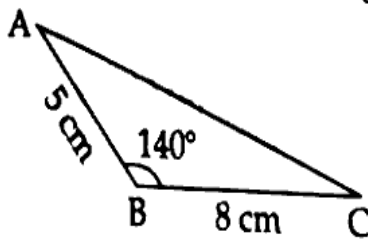
21. In the figure O is the centre of the circle and A, B, C are points on the circle. $\angle AOB = 50^\circ$, $\angle BOC = 80^\circ$.



- (i) Calculate $\angle ADB$ 1
 (ii) Calculate all angles of triangle ABC 3

P.T.O.

22. ✓ Calculate the area of triangle ABC.



23. ✓ (A) The base radius and height of a solid metal cylinder are 8 centimetres and 15 centimetres. By melting it and recasting, how many cones of base radius 6 centimetres and slant height 10 centimetres can be made? 5

OR

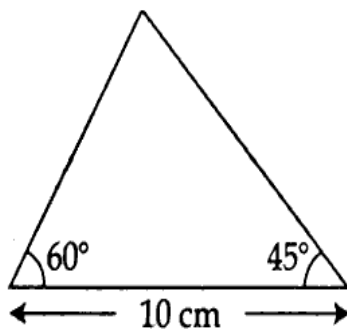
- (B) A toy is in the shape of a square pyramid of base edge 18 centimetres and height 12 centimetres. What is the total cost of painting 500 such toys at 120 rupees per square metre? 5

24. ✓ (A) From the top of a mobile tower, two steel wires are stretched to either side and attached to the ground, making angles 70° and 48° . The distance between the feet of the wires is 40 metres.

- (i) Draw a rough sketch showing these details. 1
(ii) What is the height of the tower? 4

OR

(B)



In the figure one side of the triangle is 10 centimetres and angles on that side are 60° and 45° . Calculate the area of the triangle. 5

25. ✓ Draw a triangle of circum radius 3 centimetres and two of the angles 75° and 50° . 4

26. ✓ Draw a rectangle of area 18 square centimetres and a square of same area. 4

27. Draw a circle of radius 2.5 centimetres. Draw a triangle of two angles 70° and 50° with its sides touches the circle. 5