



**INDIAN SCHOOL SOHAR**  
**TERM II EXAMINATION (2023-24)**  
**MATHEMATICS**

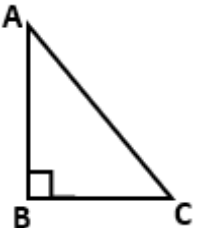
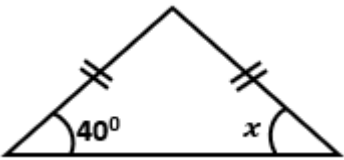
**CLASS: VII**  
**DATE: 05/03/2024**

**MAX. MARKS: 80**  
**TIME: 3 HOURS**

**General Instructions:**

1. This Question Paper has 5 Sections A, B, C, D and E.
2. Section A has 20 MCQs carrying 1 mark each.
3. Section B has 5 questions carrying 2 marks each.
4. Section C has 6 questions carrying 3 marks each.
5. Section D has 4 questions carrying 5 marks each.
6. Section E has 3 case based integrated units of assessment of 4 marks each with sub-parts of the values of 1, 1 and 2 marks each respectively.
7. All Questions are compulsory. However, an internal choice in 2 questions of 5 marks, 2 questions of 3 marks and 2 questions of 2 marks has been provided. An internal choice has been provided in the 2 marks questions of Section E.
8. Draw neat figures wherever required. Take  $\pi = 22/7$  wherever required if not stated.

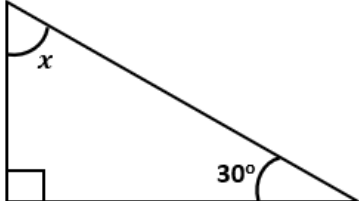
<b>SECTION A</b>				
<b>Section A consists of 20 questions of 1 mark each.</b>				
<b>S.No.</b>	<b>Questions</b>			<b>Marks</b>
1.	What is the value of $5^{20} \div 5^{15}$ ? (a) $5^{15}$ (b) $5^5$ (c) $5^{10}$ (d) $5^{35}$			1
2.	Which of the following are like terms? (a) $2pq, p^2q^2$ (b) $3, -3ab$ (c) $6xy, 10xy$ (d) $mn, pq$			1
3.	What is the area of a parallelogram whose base and altitude are 12 cm and 10 cm respectively? (a) $120 \text{ cm}^2$ (b) $120 \text{ cm}$ (c) $60 \text{ cm}^2$ (d) $1.2 \text{ m}^2$			1
4.	In a box there are red bulbs and yellow bulbs in the ratio 2 : 3. What is the percentage of red bulbs? (a) 40%                      (b) 50%                      (c) 20%                      (d) 80%			1
5.	The two interior opposite angles of an exterior angle of a triangle are $50^\circ$ and $95^\circ$ . What is the measure of the exterior angle? (a) $140^\circ$ (b) $145^\circ$ (c) $45^\circ$ (d) $35^\circ$			1
6.	The solution of the equation $m + 28 = 58$ is: (a) 10                      (b) 30                      (c) 3                      (d) -10			1
7.	Which of the following is the algebraic expression of the statement, 'Sum of numbers p and q subtracted from their product'? (a) $pq - (p + q)$ (b) $(p + q) - pq$ (c) $pq - p + q$ (d) $(p + q) + pq$			1
8.	Which of the following can be the sides of a triangle? (a) 2 cm, 2 cm, 4 cm                      (b) 5 cm, 2 cm, 3 cm                      (c) 8 cm, 5 cm, 6 cm                      (d) 3 cm, 2 cm, 9 cm			1

9.	Add 4 to eight times a number to get 60. What is the number? (a) 7 (b) 8 (c) 10 (d) 70	1
10.	Resmi buys a book for ₹ 1900 and sells it for ₹ 1060. What is the loss amount? (a) ₹ 860 (b) ₹ 840 (c) ₹ 600 (d) ₹ 900	1
11.	What is the numerical coefficient of the term $-5mn$ in the algebraic expression $12m - 5mn + 7$ ? (a) 12 (b) 5 (c) $-5$ (d) $-5mn$	1
12.	What is the value of $(-4)^3 \times 10^2$ ? (a) 6400 (b) 1600 (c) $-6400$ (d) $-1600$	1
13.	Find the number from the expanded form $5 \times 10^5 + 2 \times 10^3 + 1 \times 10^2 + 4 \times 10^1$ . (a) 502140 (b) 50214 (c) 52140 (d) 50321	1
14.	In a right-angled triangle ABC, $\angle B = 90^\circ$ , then (a) $AC^2 + BC^2 < AB^2$ (b) $AC^2 + AB^2 = BC^2$ (c) $AC^2 + BC^2 = AB^2$ (d) $AB^2 + BC^2 = AC^2$	1
		
15.	What is the circumference of a circle with diameter 49 cm? (a) 154 cm (b) 99 cm (c) 308 cm (d) 77 cm	1
16.	A school won 7 games this year against 4 games won last year. What is the percentage increase? (a) 50% (b) 75% (c) 40% (d) 80%	1
17.	What is the measure of angle x? (a) $40^\circ$ (b) $100^\circ$ (c) $180^\circ$ (d) $70^\circ$	1
		
18.	Raju's father's age is 6 years more than three times Raju's age. Raju's father is 45 years old. The equation to find Raju's age is: (a) $6y + 3 = 45$ (b) $3y + 6 = 45$ (c) $3y - 6 = 45$ (d) $6y - 3 = 45$	1
	<b>DIRECTION: In question numbers 19 and 20 a statement of Assertion(A) is followed by a statement of Reason(R). Choose the correct option.</b>	
19.	<b>Assertion (A):</b> A right angled triangle cannot be equilateral. <b>Reason (R):</b> All angles of an equilateral triangle are acute. (a) Both <b>Assertion(A)</b> and <b>Reason (R)</b> are true, and <b>Reason(R)</b> is the correct explanation of <b>Assertion(A)</b> . (b) Both <b>Assertion(A)</b> and <b>Reason(R)</b> are true, and <b>Reason(R)</b> is not the correct explanation of <b>Assertion(A)</b> . (c) <b>Assertion (A)</b> is true, but the <b>Reason(R)</b> is false. (d) <b>Assertion(A)</b> is false, but <b>Reason (R)</b> is true.	1

20.	<p><b>Assertion (A):</b> <math>6x^2y + 11</math> is a polynomial as well as a binomial.  <b>Reason (R):</b> Every polynomial is a binomial.</p> <p>(a) Both <b>Assertion(A)</b> and <b>Reason (R)</b> are true, and <b>Reason(R)</b> is the correct explanation of <b>Assertion(A)</b>.</p> <p>(b) Both <b>Assertion(A)</b> and <b>Reason(R)</b> are true, and <b>Reason(R)</b> is not the correct explanation of <b>Assertion(A)</b>.</p> <p>(c) <b>Assertion (A)</b> is true, but the <b>Reason(R)</b> is false.</p> <p>(d) <b>Assertion(A)</b> is false, but <b>Reason (R)</b> is true.</p>	1
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**SECTION B**

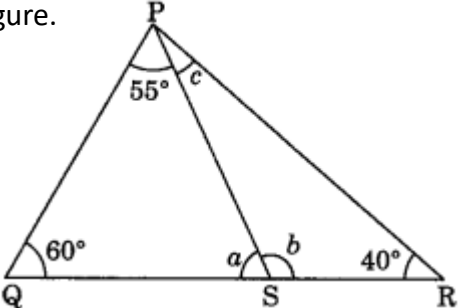
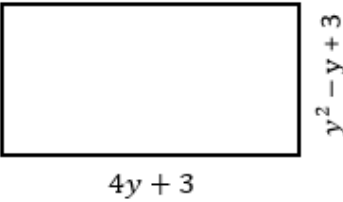
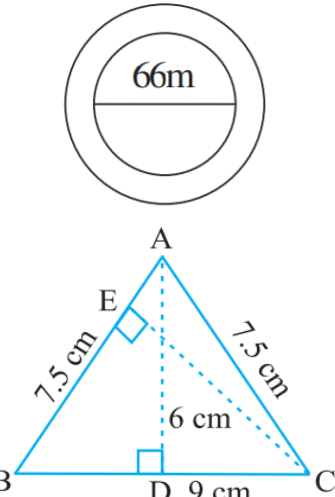
**Section B consists of 5 questions of 2 marks each.**

21.	Find the area of a circle whose circumference is 88 cm. ( $\pi = \frac{22}{7}$ )	2
22.	Solve the equation: $9(m + 12) = 81$	2
23.	The teacher tells the class that the highest marks obtained by a student in her class is 6 more than thrice the lowest marks. If the highest score is 90, what is the lowest score?	2
24.	<p>The lengths of two sides of a triangle are 16 cm and 20 cm. Between what two whole numbers should the length of the third side fall?</p> <p style="text-align: center;"><b>OR</b></p> <p>Find the value of <math>x</math>. Give the reason.</p>	2
		
25.	<p>80% of children in a class of 40 like getting wet in the rain. How many children do not like getting wet in the rain?</p> <p style="text-align: center;"><b>OR</b></p> <p>Convert 65% to decimal fraction and to fraction in the simplest form.</p>	2

**SECTION C**

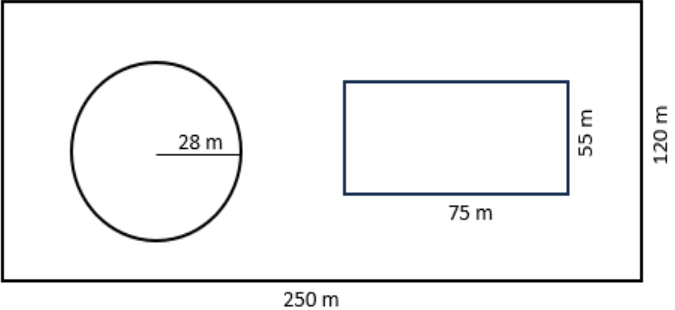
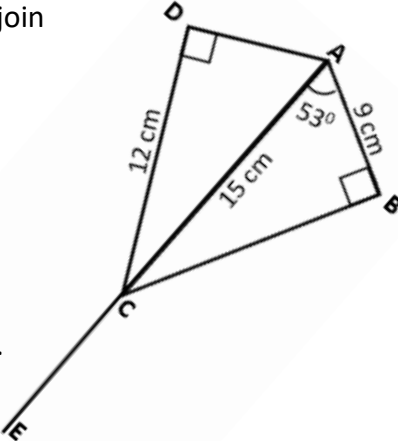

**Section C consists of 6 questions of 3 marks each.**

26.	<p>(i) Find the value of <math>(7^5 \times 7^7) \div (7^2)^3</math></p> <p>(ii) Write the number appearing in the following statement in standard form.          "60,230,000,000,000,000,000 particles are contained in 1 mole of a substance".</p>	3
27.	<p>(i) 9 is 25% of what number?</p> <p>(ii) Convert 0.98 to percentage.</p>	3
28.	<p>From a circular sheet of radius 35 cm, a square of side 25 cm is removed. Find the area of the remaining sheet. (Take <math>\pi = \frac{22}{7}</math>)</p> <p style="text-align: center;"><b>OR</b></p> <p>A gardener wants to fence a circular garden with a diameter of 21m. Find the length of the rope he needs to purchase if he makes 2 rounds of fence. Also find the cost of the rope, if it costs ₹ 4 per meter. (Take <math>\pi = \frac{22}{7}</math>)</p>	3

29.	Find the value of angles $a$ , $b$ and $c$ from the given figure. Give reasons.		3
30.	Draw tree diagram for the algebraic expression $5p^2 + 2pq - 3q^2$ to show terms and factors.  <b>OR</b> Simplify the expression $3(x + 5) + 2x - 7$ and find the value if $x = 3$ .	3	
31.	The three angles of a triangle are in the ratio 1: 2: 3. Find all the angles of the triangle.	3	
<b>SECTION D</b>			
<b>Section D consists of 4 questions of 5 marks each.</b>			
32.	(i) What is the value of $a$ , if $5x^2 - 2x + a = 8$ when $x = 1$ ? (ii) Find the value of length and breadth of the following rectangle when $y = 3$ .		5
33.	A circular flower bed is surrounded by a path 4 m wide. The diameter of the flower bed is 66 m. What is the area of this path? (Take $\pi = 3.14$ )  <b>OR</b> $\Delta ABC$ is isosceles with $AB = AC = 7.5$ cm and $BC = 9$ cm. The height $AD$ from $A$ to $BC$ , is 6 cm. (i) Find the area of $\Delta ABC$ . (ii) What will be the height $CE$ ?		5
34.	Simplify using laws of exponents: $\frac{3^5 \times (5 \times 2)^6 \times 5^2}{(5^2)^3 \times (3 \times 2)^5}$	5	
35.	A manufacturer sells his product at a loss of 10%. If his selling price was ₹ 14,400, (i) Find the cost price of the product. (ii) What was his loss amount?  <b>OR</b> Jeeva deposited ₹ 3,500 at 7% p.a. rate of interest. (i) Find the interest which will be received at the end of two years. (ii) Find the amount will be received after 2 years.	5	

**SECTION E**

**Section E consists of 3 questions of 4 marks each.**

36.	<p>A rectangular shaped field is given below. The field has a circular grass patch and a rectangular playground.</p> <p>(i) What is the area of the rectangular field?</p> <p>(ii) What is the perimeter of the grass patch?</p> <p>(iii) Find the cost of fencing the rectangular field at the rate of ₹ 8 per metre.</p> <p style="text-align: center;"><b>OR</b></p> <p>(iii) What is the cost to fix the grass patch, if the rate is ₹ 10 per m<sup>2</sup>?</p>		1 1 2
37.	<p>In Mathematics activity students of class VII are asked to join two pieces of triangular paper. They want to make a kite by joining both the triangles and fixing a tail. They tried and obtained the shape given below.</p> <p>(i) Find the measure of <math>\angle ACB</math> ?</p> <p>(ii) What is the measure of <math>\angle BCE</math> ?</p> <p>(iii) In <math>\triangle ABC</math>, find the length of BC. Write the reason.</p> <p style="text-align: center;"><b>OR</b></p> <p>(iii) In <math>\triangle ADC</math>, find the length of AD. Write the reason.</p>		1 1 2
38.	<p>Nowadays, online shopping is very popular among buyers. There are many applications and websites available for buyers.</p> <p>(i) In a survey 35 out of 50 people prefer online shopping over shopping at the local market. Find the percentage of people in the survey who prefer online shopping.</p> <p>(ii) In the local market the cost of a box of 10 pens is ₹ 250. Find the cost of a pen.</p> <p>(iii) In one website cost of a book is reduced from ₹ 400 to ₹ 380. What is the percentage of decrease?</p> <p style="text-align: center;"><b>OR</b></p> <p>(iii) If a shopkeeper buys a laptop online at a price of ₹ 30,000 and sells at ₹ 33,600 find his profit per cent or loss per cent.</p>		1 1 2

\*\*\*\*\*THE END\*\*\*\*\*