

**SAMPLE PAPER**  
**TERM-I (2025-26)**  
**CLASS-VII (MATHEMATICS)**

Time: 3 hours

M.M: 80

**General instructions**

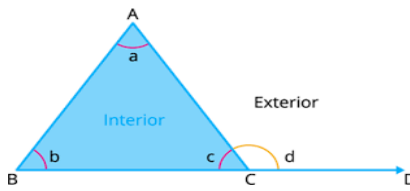
1. *This question paper contains 38 questions and 10 printed pages.*
2. *This Question paper contains - five sections A, B, C, D and E. Each section is compulsory. However, there are internal choices in some questions.*
3. *Section A has 18 MCQ's and 02 Assertion-Reason based questions of 1 mark each.*
4. *Section B has 5 Very Short Answer (VSA)-type questions of 2 marks each.*
5. *Section C has 6 Short Answer (SA)-type questions of 3 marks each.*
6. *Section D has 4 Long Answer (LA)-type questions of 5 marks each.*
7. *Section E has 3 source based/case based/passage based/integrated units of assessment of 4 marks each with sub parts.*

S.No.	Section A (This section comprises multiple choice questions of 1 mark each.)	Marks
1	The solution of the equation $\frac{p}{2} + 1 = 3$ is: (A) 4                      (B) 5                      (C) 1                      (D) 8	1
2	The value of $0.25 \times 0.04$ is: (A) 100                      (B) 0.01                      (C) 1.0                      (D) 10.0	1
3	The quotient when 0.00852 is divided by 0.213: (A) 4                      (B) 0.4                      (C) 0.04                      (D) 0.004	1

4	<p>If <math>(\frac{1}{3^3})^x = \frac{1}{3^6}</math>, then the value of x is:</p> <p>(A) 1                      (B) 2                      (C) 3                      (D) 4</p>	1
5	<p>The additive inverse of <math>\frac{-7}{12}</math> is:</p> <p>(A) <math>\frac{-12}{7}</math>                      (B) <math>\frac{-7}{12}</math>                      (C) <math>\frac{-5}{12}</math>                      (D) <math>\frac{7}{12}</math></p>	1
6	<p>The length of two sides of a triangle are 5 cm and 9 cm.</p> <p>The length of the third side cannot be _____.</p> <p>(A) 12cm                      (B) 8cm                      (C) 5cm                      (D) 15cm</p>	1
7	<p>The teacher tells the class that the highest marks obtained by a student in her class is 7 more than twice the lowest marks. The highest score is 87, then the lowest score is:</p> <p>(A) 35                      (B) 47                      (C) 40                      (D) 73</p>	1
8	<p>The decimal representation of <math>\frac{-31}{250}</math> is:</p> <p>(A) -1.25                      (B) -12.4                      (C) -0.124                      (D) -0.0124</p>	1
9	<p><math>\frac{-3}{5} - (\frac{-2}{15})</math> is equal to:</p> <p>(A) <math>\frac{-11}{5}</math>                      (B) <math>\frac{-7}{15}</math>                      (C) <math>\frac{-1}{15}</math>                      (D) <math>\frac{7}{15}</math></p>	1
10	<p>The standard form of <math>\frac{12}{-48}</math> is:</p>	1

	(A) $\frac{-12}{48}$ (B) $\frac{-6}{24}$ (C) $\frac{-1}{4}$ (D) $\frac{1}{4}$	
11	<p>The rational number which is its own reciprocal:</p> <p>(A) 0                      (B) 1                      (C) <math>\left  \frac{-2}{13} \right </math>                      (D) <math>\left  \frac{-9}{13} \right </math></p>	1
12	<p>The sum of an exterior angle of a triangle and its adjacent angle is always:</p> <p>(A) <math>180^\circ</math>                      (B) <math>90^\circ</math>                      (C) <math>45^\circ</math>                      (D) <math>75^\circ</math></p>	1
13	<p><math>x = 6</math> is a solution of the equation:</p> <p>(A) <math>4x - 3 = 21</math>    (B) <math>4x + 3 = 21</math>  (C) <math>3x + 4 = 21</math>    (D) <math>3x - 4 = 21</math></p>	1
14	<p>The mean of first five prime numbers is:</p> <p>(A) 5                      (B) 5.6                      (C) 6.5                      (D) 6</p>	1
15	<p><math>2.7 \times 10^{-3}</math> is equal to:</p> <p>(A) 0.000027                      (B) 0.00027                      (C) 0.0027                      (D) 2.007</p>	1
16	<p>Reciprocal of the sum of <math>\frac{-4}{5}</math> and 3 is:</p> <p>(A) <math>\frac{11}{5}</math>                      (B) <math>\frac{17}{5}</math>                      (C) <math>\frac{5}{19}</math>                      (D) <math>\frac{5}{11}</math></p>	1
17	<p>The range of the data 46, 64, 87, 41, 58, 77, 35, 90 is:</p>	1

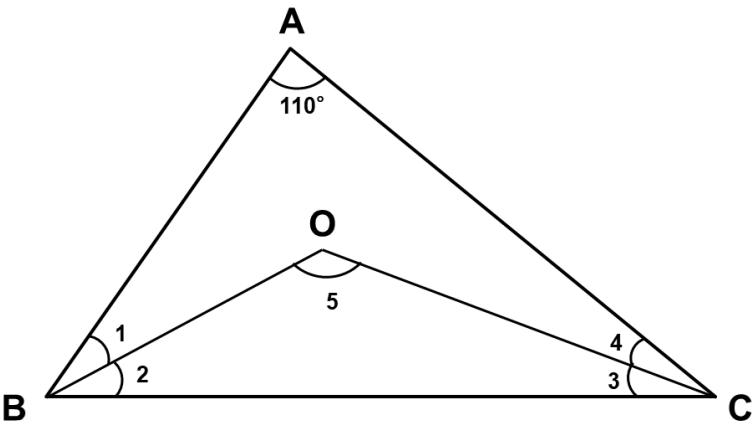
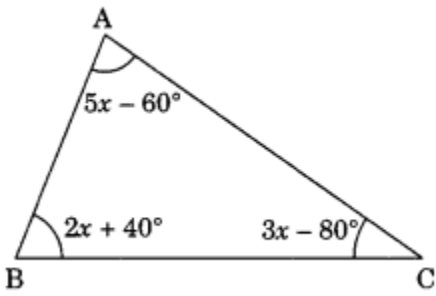
	(A) 65                      (B) 45                      (C) 55                      (D) 35	
18	<p>The centroid of a triangle divides each median in the ratio:</p> <p>(A) 2 : 1                      (B) 2 : 3                      (C) 3 : 1                      (D) 1 : 3</p>	1
<p>Q19 - 20 are Assertion-Reasoning based questions. ASSERTION- REASONING QUESTION: Choose one of the following for answering:</p> <p>(A) Both A and R are true and R is the correct explanation of A.          (B) Both A and R are true but R is not the correct explanation of A.          (C) A is true but R is false.          (D) A is false but R is true.</p>		
19	<p>Assertion(A): Every fraction is a rational number.</p> <p>Reason(R): Rational number is always expressed in the form of <math>\frac{p}{q}</math> where <math>q \neq 0</math>, p, q are integers</p>	1
20	<p>Assertion(A): The Mode of the following data 21, 6, 17, 6, 17, 18, 12, 6, 4 is</p> <p>17.</p> <p>Reason(R): Mode is the observation which occurs the maximum number of times.</p>	1
<p style="text-align: center;"><b>Section B</b></p> <p style="text-align: center;">(This section comprises a very short answer type (VSA) of 2 marks each.)</p>		
21	<p>By what number <math>(\frac{-3}{4})^5</math> be multiplied so that the product may be equal to <math>(\frac{-64}{27})^{-1}</math>?</p> <p style="text-align: center;"><b>OR</b></p>	2

	Find x if $(-3)^{x-2} = -243$	
22	Solve: $5y - 4 = \frac{1}{6}$	2
23	Find the values of x and y: $\frac{-15}{9} = \frac{x}{36} = \frac{-5}{y}$	2
24	Mean of five numbers is 35. If one number is excluded, then the mean is 25. Find the excluded observation.  <b>OR</b>  The mean of eight numbers is 45. If one more number is included, then the mean is 48. Find the included number.	2
25	<p>During break, Ronit and Reema were discussing one of the Property of a triangle.</p> <p>“i Think this exterior angle d is equal to just one of the interior opposite angle.”</p> <p>“Hmm.. I thought the exterior angle equals the sum of both interior opposite angles.”</p>  <p>Who is correct, Ronit or Reema? Justify your answer.</p>	2

### Section C

(This section comprises short answer type (SA) of 3 marks each.)

26	<p>Solve: : <math>\frac{x+1}{5} - \frac{x+2}{6} = 2</math></p> <p style="text-align: center;"><b>OR</b></p> <p>A 66 cm long wire is used to fence an isosceles triangle whose two equal sides are each 3 cm more than twice the third side. Find the length of its sides.</p>	3
27	<p>Represent <math>\frac{-3}{5}</math> and <math>\frac{6}{5}</math> on the same number line.</p>	3
28	<p>Find the value of <math>x</math>, if</p> $\frac{1}{64} \times \left(\frac{1}{2}\right)^3 = \left(\frac{1}{2}\right)^{3(x-1)}$	3
29	<p>Simplify the following and express the result as decimal: [75.05 ÷ 5] × 0.001 + 2.351</p>	3
30	<p>The product of 2 rational numbers is <math>\frac{-3}{7}</math>. If one of them is <math>\frac{2}{21}</math>, find the other number.</p> <p style="text-align: center;"><b>OR</b></p> <p>What number should be added to <math>\frac{9}{7}</math> so as to get – 5 ?</p>	3
31	<p>Write the following rational numbers in ascending order:</p>	3

	$\frac{-3}{4}, \frac{5}{32}, \frac{-7}{16}$	
<p style="text-align: center;"><b>Section D</b></p> <p style="text-align: center;">(This section comprises a long answer type (LA) of 5 marks each.)</p>		
32	<p>In fig, <math>\triangle ABC</math> and <math>\triangle OBC</math> are two triangles on the same base BC. Angle bisectors of B and C meet at A. If <math>\angle A = 110^\circ</math>, find <math>\angle 5</math></p>  <p style="text-align: center;"><b>OR</b></p> <p>In <math>\triangle ABC</math>, Find the values of <math>\angle A</math>, <math>\angle B</math> and <math>\angle C</math>.</p> 	5
33	The sale of English and Hindi books in the years 2021, 2022, 2023 and 2024 are given below:	5

	<table><tr><td>Year</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td></tr><tr><td>English</td><td>350</td><td>400</td><td>450</td><td>620</td></tr><tr><td>Hindi</td><td>500</td><td>525</td><td>600</td><td>630</td></tr></table> <p>Draw a double bar graph.</p>	Year	2021	2022	2023	2024	English	350	400	450	620	Hindi	500	525	600	630	
Year	2021	2022	2023	2024													
English	350	400	450	620													
Hindi	500	525	600	630													
34	<p>If <math>x = \frac{5}{6}</math>, <math>y = \frac{-7}{3}</math> and <math>z = \frac{2}{9}</math>, Verify that <math>x \times (y + z) = x \times y + x \times z</math>.</p> <p>Name the property used.</p>	5															
35	<p>(A) Find the value of <math>x</math> if</p> $\left[\left(\frac{3}{5}\right)^3\right]^{-2} = \left(\frac{3}{5}\right)^{2x}$ <p>(B) Express following in the form <math>k \times 10^n</math>; (<math>1 \leq k &lt; 10</math>)</p> $[(3.4 \times 10^{-4}) \times (0.5 \times 10^{-3})] \div [2.0 \times 10^{-5}]$ <p style="text-align: center;"><b>OR</b></p> <p>(A) Nitu had <math>9^3</math> pens. She distributed them among <math>3^3</math> children. How many pens does each child get?</p> <p>(B) Simplify : <math>\left\{\left[\left(\frac{4}{10}\right)^3\right]^2 \div \left(\frac{4}{10}\right)^2\right\} \times \left(\frac{1}{10}\right)^{-2} \times (4)^{-1}</math>.</p>	5															
<p style="text-align: center;"><b>Section E</b></p> <p style="text-align: center;">(This section comprises 3 case study questions of 4 marks each.)</p>																	



36	<p><b><u>STAY CLOSE TO NATURE, IT WILL NEVER FALL YOU</u></b></p> <p>Rama has a beautiful garden in Delhi. One day due to heavy rain and storm one of the trees got broken but did not separate as shown in the figure. The height of the unbroken part is 12 m and the broken part of the tree has fallen 5 m away from the base of the tree. On the basis of above information, answer the following questions:</p> <div data-bbox="347 478 889 810" data-label="Image"> </div> <p>(A) Identify the type of triangle.          (B) Find the length of the broken part.          OR          If <math>\angle C = 25^\circ</math>, then find the measure of <math>\angle A</math>          (C) Find the total length of the tree (before it broke).</p>	4
37	<p><b>Case Study based question:</b></p> <div data-bbox="539 1224 1211 1547" data-label="Image"> </div> <p>Display board decoration was being organized in Harshita's school. Her teacher divided the children into groups of three each. Harshita, Neha and Rama were in one group. Harshita was made the team leader. They all decided to bring satin ribbons of different colors for decorating the board. Harshita decided that Neha would bring <math>\frac{62.5}{5}</math> m of red ribbon and Rama would bring 7.65 m of yellow ribbon and she herself would bring 5.783 m of blue ribbon. All three then brought the required material and decorated the board</p>	4

	<p>beautifully. Based on above information answer the following questions:</p> <p>(A) Find the length of the red ribbon in the decimal form.</p> <p>(B) Find the total length of the ribbon brought by the team.</p> <p>(C) Out of the total length of ribbon, the team was able to use only 16.72 m of ribbon, find the length of the ribbon left with the team.</p> <p style="text-align: center;"><b>OR</b></p> <p>If they want to decorate 7 such boards, how much length of ribbon is needed, if 16.72 m of ribbon is used for one board?</p>	
38	<p>Rohan's grandmother has ₹10760 in her purse in the form of ₹10, ₹20, and ₹50 notes. The number of ₹10 and ₹20 notes is the same. The number of ₹50 notes is 4 more than ₹10 notes.</p> <p>Based on the above information, answer the following questions:</p> <p>(A) If the number of ₹10 notes is <math>x</math>, write the expression to represent the number of ₹50 notes in terms of <math>x</math>.</p> <p>(B) Write the equation to represent the total amount.</p> <p>(C) Solve for <math>x</math> on the basis of (ii) answer.</p> <p style="text-align: center;"><b>OR</b></p> <p>Find the total value of ₹10 and ₹50 notes.</p>	4