



INDIAN SCHOOL SALALAH
SECOND TERM EXAMINATION – FEBRUARY – MARCH 2023
MATHEMATICS



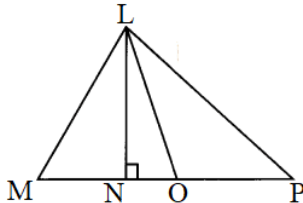
Class: VII

Time: 3 hours

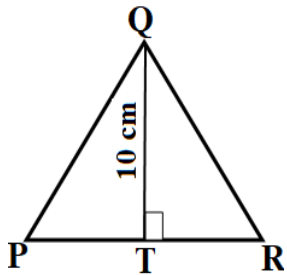
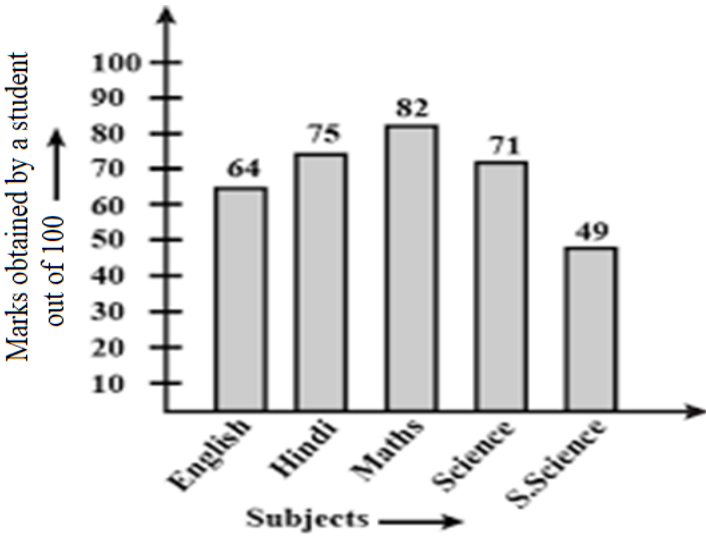
Maximum Marks: 80

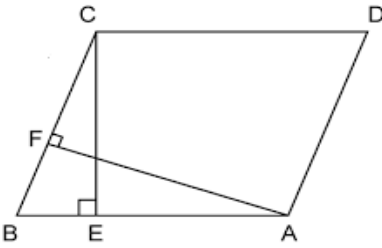
General Instructions:

- a) All questions are compulsory.
- b) This question paper consists of 30 questions divided into 4 sections. Section A contains 6 questions of 1 mark each. Section B contains 6 questions of 2 marks each. Section C contains 10 questions of 3 marks each. Section D contains 8 questions of 4 marks each.

NO	SECTION A	MARKS
1	Find the range of the following data. 12, 15, 7, 20, 13 18, 14, 22, 25, 19	1
2	Find $(2^0 + 5^0) \times 3^0$	1
3	In a city 45% of the population are males, 35% are females and the remaining are children. What is the percentage of children in the city?	1
4	In the given figure name the median and the altitude. 	1
5	Find: a) The coefficient of x in: $-7xy^2z$ b) The numerical coefficient of the terms in: $-pq + 3p^2q^2$	1
6	Find the area of a parallelogram whose height is 3 cm and base is 9cm.	1
SECTION B		
7	Express 1400 as the product of powers of prime factors.	2
8	Add the following expressions: $3x^2y^2 - 4xy + 5$ and $-2x^2y^2 + 7xy - 8$.	2
9	Manu purchased a bicycle for ₹ 1800 and sold it at ₹ 2016. Find the gain or loss on the transaction. Also find the gain% or loss%.	2

10	Find the value of x and y .		2
11	Circumference of a circle is 308cm. Find its radius.		2
12	Find the median and mode of the following data: 35,37,35,44,30 43, 35,41,38		2
SECTION C			
13	Triangle ABC is right angled at C. If AB is 20 cm and BC is 12cm, Find AC.		3
14	Simplify: $\frac{2^3 \times 3^2 \times 125}{2^2 \times 18 \times 5^2}$		3
15	The radius of a circular sheet of metal is 14cm. A circular piece of sheet 7cm is cut out from its centre. What is the area of the sheet left?		3
16	From the sum of $a^2 + 3ab - 4b^2$ and $9a^2 - 6ab + 2b^2$ subtract $a^2 - 5ab - 3b^2$.		3
17	Find the amount to be paid at the end of 4 years on a sum of ₹ 12,000 at 10% per annum.		3
18	The heights of 7 players are 153cm, 140cm, 150cm, 154cm, 148cm, 146cm and 152cm. Find their mean height. How many students height is less than the mean height?		3
19	Find the perimeter of a rectangle whose breadth is 8cm and length of one of its diagonals is 17cm.		3

20	<p>a) The area of the ΔPQR is 100cm^2. Its altitude QT is 10 cm. Find its base PR.</p> <p>b) Find the area of a circle whose diameter is 7 cm.</p>	3
		
21	If a watch bought for ₹ 24,000 is sold at 12% profit, what is its selling price?	3
22	<p>Study the bar graph given and answer the following questions:</p> <div style="text-align: center;">  </div> <p>a) What information is displayed in the bar graph?</p> <p>b) In which subject the student scored maximum marks?</p> <p>c) If 75 and above marks denote a distinction, then in which subjects the student got distinction?</p>	3
SECTION D		
23	<p>a) Verify if the ΔPQR with sides $PQ = 6\text{cm}$, $QR = 8\text{cm}$ and $PR = 10\text{cm}$ is a right triangle.</p> <p>b) A ladder 20 m long is kept inclined to reach a window 16m high. How far from the wall should the foot of the ladder rest?</p>	4
24	<p>Simplify:</p> <p>a) $(-2^2) \times (-3^3)$</p> <p>b) $(7^{21} \div 7^{12}) \times 7^5$ Write the answer in exponential form.</p> <p>c) $\frac{8^0 \times 3^0}{2^0 + 3^0}$</p> <p>d) Express the following number in the standard form 30,42,00,00,000</p>	4

25	<p>In the given figure, ABCD is a parallelogram. CE is the altitude from C to AB and AF is the altitude from A to BC. If $AB = 24$ cm, $BC = 18$ cm and area of the parallelogram is 360 cm^2, then find the length of the altitudes CE and AF.</p> 	4															
26	<p>a) If $x = 2, y = -2$ and $z = 1$, find the value of the following expression $5x^2 + 4y^2 - 3z^2$</p> <p>b) How many terms are there in the expression $4x^2 + 5x - 7$? Identify the constant term.</p>	4															
27	<p>a) Calculate 10% of ₹ 500.</p> <p>b) Sajana saves ₹4200 from her salary every month. If this is 12 % of her salary, what is her actual salary?</p>	4															
28	<p>The following table shows number of boys and girls in a school in classes 7 to 10. Represent the data by drawing a double bar graph. (Take the scale as 1 unit = 5 students)</p> <table border="1" data-bbox="260 1182 1121 1395"> <thead> <tr> <th>Classes</th> <th>Class 7</th> <th>Class 8</th> <th>Class 9</th> <th>Class 10</th> </tr> </thead> <tbody> <tr> <td>Number of boys</td> <td>25</td> <td>35</td> <td>30</td> <td>25</td> </tr> <tr> <td>Number of girls</td> <td>20</td> <td>25</td> <td>35</td> <td>15</td> </tr> </tbody> </table>	Classes	Class 7	Class 8	Class 9	Class 10	Number of boys	25	35	30	25	Number of girls	20	25	35	15	4
Classes	Class 7	Class 8	Class 9	Class 10													
Number of boys	25	35	30	25													
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29	<p>a) Express in usual form 7.05×10^6</p> <p>b) Write exponential form for $4 \times 4 \times 4$ taking base as 2.</p> <p>c) Write the expanded form for 500674.</p>	4															
30	<p>Simplify the following expression : $2x^2 + 3(x - 4) + 5x - x^2$</p> <p>Also find the numerical value for the simplified expression when $x = (-2)$.</p>	4															