



INDIAN SCHOOL SOHAR
TERM II EXAMINATION (2022-23)
MATHEMATICS

SET - 1

Class: VIII

Maximum Marks: 80

Date: 7.3.2023

Time: 3 hours

General Instructions:

This question paper contains 4 printed pages with 36 questions. All questions are compulsory.

This question paper is divided in to five sections – Sections A, B, C, D and E.

Section A comprises of 15 multiple choice questions of 1 mark each.

Section B comprises of 6 questions of 2 marks each. Internal choice has been given in two questions.

Section C comprises of 7 questions of 3 marks each. Internal choice has been given in three questions.

Section D comprises of 6 questions of 4 marks each. Internal choice has been given in three questions.

Section E comprises of 2 case study-based questions of 4 marks each. Internal choice has been given in one sub part question of 2 marks.

SECTION A

Question numbers 1 to 15 carry 1 mark each

S No.		Marks
1	If $3m - 2 = 2m - 3$, then the value of 'm' is a) (-1) b) 0 c) 1 d) $\left(\frac{-3}{2}\right)$	1
2	If $cx + d = 0$, then the value of 'x' is a) $\left(\frac{-c}{d}\right)$ b) $\left(\frac{-d}{c}\right)$ c) $\left(\frac{c}{d}\right)$ d) $\left(\frac{d}{c}\right)$	1
3	Number of natural numbers lie between 99^2 and 100^2 is a) 99 b) 100 c) 198 d) 200	1
4	The one's digit in the square of 3127 is a) 3 b) 4 c) 7 d) 9	1
5	A bag is available for ₹ 90. The shopkeeper allows 10% discount on marked price. The marked price of the bag is a) ₹ 80 b) ₹ 95 c) ₹ 100 d) ₹ 110	1
6	If CP = ₹ 500 and SP = ₹ 555 then profit percent is a) 5% b) 10% c) 11% d) 50%	1
7	The area of a rectangle whose length = $5xy$ and breadth = $3yz$ is a) $15xyz$ b) $15xy^2z$ c) $15y$ d) $15xz$	1
8	$55^2 - 45^2$ is equal to a) 10 b) 100 c) 1000 d) 10000	1
9	The area of a rhombus whose diagonals are 16cm and 12cm is a) 24 cm^2 b) 32 cm^2 c) 96 cm^2 d) 192 cm^2	1
10	The total surface area of a cube of side 10cm is a) 10 cm^2 b) 100 cm^2 c) 400 cm^2 d) 600 cm^2	1

11	$(-1)^{100}$ is equal to a) 100 b) 1 c) (-1) d) (-100)	1
12	$(9^0 + 10^0 + 11^0)^{-2}$ is equal to a) $\frac{1}{900}$ b) $\frac{1}{9}$ c) 9 d) 900	1
13	The highest common factor of 25pqr, 10qr and 50pr is a) 5r b) 5pqr c) 5qr d) 5pr	1
14	The factorization of $a(x + y + z) + b(x + y + z) + c(x + y + z)$ is a) $(x + y + z)(a + b + c)$ b) $(ax + by + cz)$ c) $(ab + bc + ca)(x + y + z)$ d) $(a + b + c)(xy + yz + zx)$	1
15	The coordinates of the origin are a) (0, 0) b) (1, 0) c) (0, 1) d) (1, 1)	1

SECTION B

Question numbers 16 to 21 carry 2 marks each

16	Find the Pythagorean triplet whose one member is 14.	2
17	The cost of a pair of shoes is ₹ 1900. The sales tax charged was 8%. Find the bill amount. OR Shiv went to a restaurant and ordered for a pizza. When he saw the bill, he was surprised to notice that it was ₹ 345 which was 15% more than the bill of the last time. What was the price of the same pizza when he came last time?	2
18	Find the product $(6ab)(4a^2b)(5ab^2)$ OR Using the identity $(a + b)(a - b) = a^2 - b^2$, find the value of 105×95	2
19	A right circular cylinder has base radius 8cm and height 42cm. Find the curved surface area of the cylinder. $\left[\pi = \frac{22}{7} \right]$	2
20	Find the value of m for which $5^m \div 5^{-3} = 5^5$	2
21	Factorise $x^2yz + xy^2z + xyz^2$	2

SECTION C

Question numbers 22 to 28 carry 3 marks each

22	The sum of three consecutive multiples of 11 is 363. Find these multiples. OR The present age of Sahil's mother is three times the present age of Sahil. After 5 years, their ages will add to 66 years. Find their present ages.	3
23	Find the square root of 7744 by prime factorisation method. OR Find the square root of 7744 by division method.	3
24	A shopkeeper sold two tables for ₹ 9000 each. On one table he gained 20% and on the other he lost 20%. Find his total gain or loss.	3

25	Simplify $(x + y)(x^2 - xy + y^2)$	3
26	Find the height of a trapezium whose parallel sides are 40cm and 35cm and whose area is 450cm^2 . OR The floor of a rectangular hall has a perimeter of 250m. If its height is 6m, find the cost of painting its four walls at the rate of ₹ 100 per m^2 .	3
27	Evaluate $\left[\left(\frac{1}{5}\right)^4 \div \left(\frac{1}{5}\right)^2\right]^{-1}$	3
28	Factorise $121x^2 - 88xy + 16y^2$	3

SECTION D

Question numbers 29 to 34 carry 4 marks each

29	Deveshi has a total of ₹ 590 as currency notes in the denominations of ₹ 50, ₹ 20 and ₹ 10. The ratio of the number of ₹ 50 notes and ₹ 20 notes are 3 : 5. If she has a total of 25 notes, how many notes of each denomination she has? OR The perimeter of a rectangular swimming pool is 154m. Its length is 2m more than twice its breadth. What are the length and breadth of the pool?	4
30	Find the difference between compound interest and simple interest on a sum of ₹ 1,60,000 at the rate of 10% per annum for 2 years compounded half yearly. OR The value of a car depreciates at the rate of 15% p. a. What will be its value 2 years hence, if the present value is ₹ 6,00,000? Also find the total depreciation during this period.	4
31	Simplify $(3x + 4)^2 - (3x - 4)^2$ OR Find the product using suitable identity $\left(x - \frac{1}{x}\right)\left(x + \frac{1}{x}\right)\left(x^2 + \frac{1}{x^2}\right)\left(x^4 + \frac{1}{x^4}\right)$	4
32	A rectangular room of dimensions 11m x 8m x 3m is to be painted. If it costs ₹ 550 per square metre, find the cost of painting the walls and roof of the room.	4
33	Factorise and divide as directed: $4xy(y^2 + 6y - 16) \div 2x(y + 8)$	4
34	Plot the points (2, 3) and (3, 2) on a graph paper. Find the coordinates of the points at which the line passing through these points meets the x-axis and y-axis.	4

SECTION E

Question numbers 35 and 36 carry 4 marks each

<p>35</p>	<p>The adjacent graph shows the yearly sales figures for a manufacturing company.</p> <p>a) What were the sales in 2004? b) What were the sales in 2005? c) What was the difference between the sales in 2003 and 2006?</p> <p style="text-align: center;">OR</p> <p>Find the total sales from 2002 to 2006?</p>	<p style="text-align: center;">1 1 2</p>
<p>36</p>	<p>Aditya bought a plot of land for ₹ 32,50,000. He built a boundary wall around it which cost him ₹ 2,45,000. He advertised in a local newspaper about his intention to sell it which cost him ₹ 5,000. He was finally able to sell it for ₹ 42,00,000.</p> <p>a) What is his profit? b) What is his profit per cent?</p>	<p style="text-align: center;">2 2</p>


