INDIAN SCHOOL SALALAH

SECOND TERM EXAMINATION – FEBRUARY – MARCH 2023

MATHEMATICS

Class: VIII

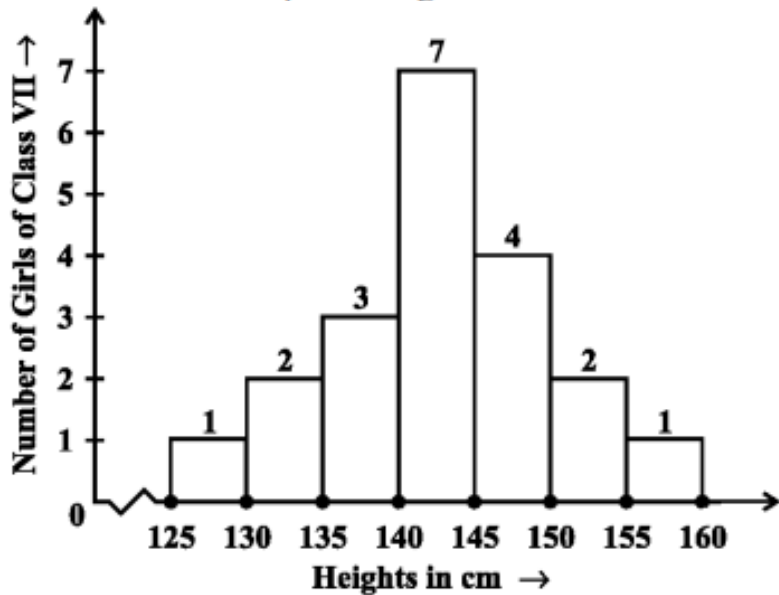**Time: 3 hours**   **Maximum Marks: 80**
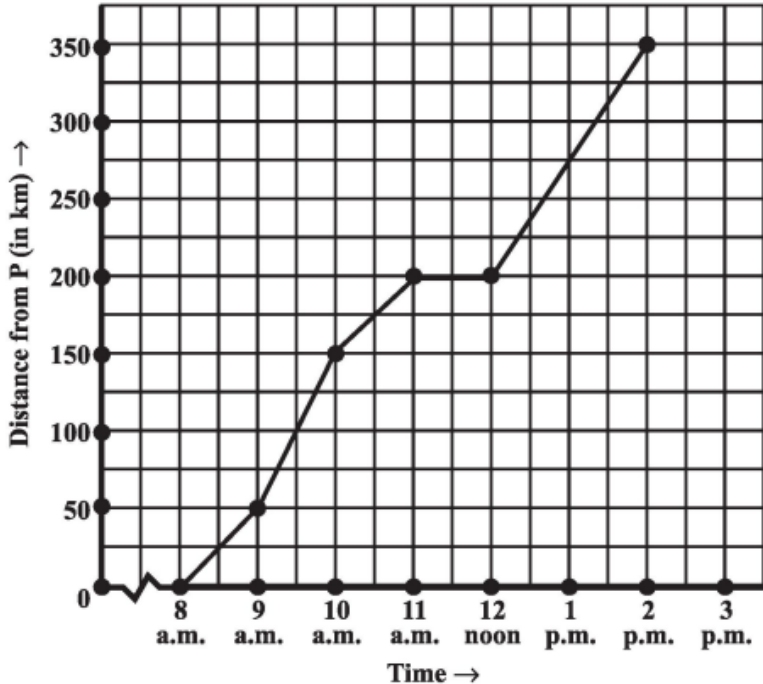
General Instructions:

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.

c) Internal choices have been provided in Section C and Section D. You have to attempt only one of the choices in such questions

NO	SECTION A	MARKS
1	Find the ratio of 3 km to 300 m.	1
2	Find the volume of a rectangular box whose length, breadth and height are $2x$, $3x^2y$ and y^3 respectively.	1
3	The area of a rhombus is 360 cm^2 and one of the diagonals is 18 cm. Find the other diagonal.	1
4	Write the number in standard form 0.0000000564	1
5	Find the common factor of the terms $21pq$, $7qr$	1
6	A die is thrown once. Find the probability of getting a number lying between 2 and 6.	1
	SECTION B	
7	Meena saves ₹ 4000 from her salary. If this is 20 % of her salary. What is her salary?	2
8	Identify the terms and their coefficients for the expression: $\dfrac{x^2}{2} - xyz$	2
9	The area of a trapezium shaped field is 88 cm^2 , the distance between two parallel sides is 8 cm and one of the parallel side is 15 cm. Find the other parallel side	2
10	If $5^{2x+1} \div 25 = 125$, then find the value of x .	2

11	Factorise: $y^2 + yz + 7y + 7z$	2
12	Observe the histogram and answer the questions given below. (i) Which group contains maximum girls? (ii) How many girls have a height of 140 cm and more?	2
	SECTION C	
13	A box contains 5 red marbles, 8 white marbles and 4 green marbles. One marble is taken out of the box at random. What is the probability that the marble taken out will be (i) red ? (ii) white ? (iii) not green?	3
14	Factorise: $144a^2 - 240ab + 100b^2$	3
15	Rahul bought a Mobile phone for ₹ 21000 including 5% VAT. Find the price of the Mobile phone before VAT was added.	3
16	Subtract $5p(p - 7q - 8r)$ from $2p(-4r + 3p - 2q)$	3
17	Simplify $2x(7x + 3) - 2(4x - 1) + 6$ and find its value for x = 2 **OR** Show that $(9p - 5q)^2 + 180pq = (9p + 5q)^2$	3
18	The length, breadth and height of a room are 5 m, 4 m and 3 m respectively. Find the cost of white washing the walls of the room and the ceiling at the rate of ₹10 per m^2 .	3

19	Simplify $\left\{\left(\frac{1}{3}\right)^{-2} - \left(\frac{1}{2}\right)^{-3}\right\} \div \left(\frac{1}{4}\right)^{-2}$	3
20	Factorise the expression and divide: $48a^3(27a^2 - 12) \div 36a^2(3a + 2)$

OR

Factorise: $y^2 - 5y - 24$ | 3 |
| 21 | The given graph describes the distances of a car from a city P at different times when it is travelling from City P to City Q, which are 350 km apart. Study the graph and answer the following:

(a) How much distance did the car cover during the period 9 a.m. to 11 a.m.?

(b) What was the time when the car had covered a distance of 175 km since its start?

(c) Is it a linear graph ? | 3 |
| 22 | Factorise: $x^4 - 625$ | 3 |
| | **SECTION D** | |
| 23 | Niha invested ₹ 75000 at an interest rate of 8% per annum compounded annually. What amount would she get after 2 years? Also, find the compound interest.

OR

Suryadev took a loan of ₹ 150000 from a bank at an interest rate of 8% per annum for 2 years compounded annually. What amount would he pay after 2 years? Also, find the compound interest. | 4 |

24	A shop gives 20% discount. (a) What would be the sales price of a dress, if its marked price is ₹ 120 ? (b) What would be the marked price of a pair of shoes, if its sales price is ₹ 400?	4
25	Draw a pie chart to show the number votes received in the election of school leader | Name of Candidates	Number of votes
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Ashly	30
Rohit	20
Salim	40
John	30
Total	120		4
26	Use a suitable identity to get each of the following products. (i) $\left(\dfrac{3x}{5} - \dfrac{5y}{6}\right)\left(\dfrac{3x}{5} - \dfrac{5y}{6}\right)$ (ii) 102×105	4
27	The diameter of a roller is 84 cm and its length is 120 cm. It takes 500 complete revolutions to move once over to level a playground. Find the area of the playground in m^2 .	4
28	A patient in a hospital is given soup daily in a cylindrical bowl of radius 3.5 cm. If the bowl is filled with soup to a height of 4 cm, how much soup the hospital has to prepare daily to serve 100 patients? **OR** Find the volume and the lateral surface area of a cuboid which is 12 m long, 8 m wide and 6 m high.	4
29	Simplify: $\dfrac{\left(3^2\right)^3 \times (10)^{-3} \times 32 \times t^{-9}}{81 \times 5^{-3} \times t^{-12}}$	4
30	The following table gives the quantity of petrol and its cost. Draw a graph to represent the data. 	No. of litres of petrol	10	15	20	25
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Cost of petrol in ₹.	500	750	1000	1250		4

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