INDIAN SCHOOL AL WADI AL KABIR

Final Examination Revision Paper (2025-26)

Class: VIII Sub: MATHEMATICS Max Marks: 80

Instructions:

Section A: Multiple Choice Questions (Q.1 to Q.15) & Source based Question (Q.16)
Section B: Short Answer Questions of 2 marks each (Q.17 to Q.21)
Section C: Long Answer Questions (Type – 1) of 3 marks each (Q.22 to Q.27)
Section D: Long Answer Questions (Type – 2) of 4 marks each (Q.28 to Q.33)
& Case study Questions (Q.34 & Q.35) of 4 marks each.

Section A: Multiple Choice Question (Q.1 to Q.15) of **1** mark each								
1.	The multiplicative inverse of 8^{-3} is							
	A	8^{-3}	**B**	8^{3}	**C**	3	**D**	-3
2.	The value of $\left(\frac{1}{2}\right)^{-2} + \left(\frac{1}{3}\right)^{-3} + \left(\frac{1}{2}\right)^{-4}$							
	A	47	**B**	40	**C**	60	**D**	64
3.	Which of the following is equal to its own cube?							
	A	-1	**B**	**2**	**C**	4	**D**	8
4.	The standard form of 0.0003574 is:							
	A	3.574×10^{-5}	**B**	3.574×10^{-4}	**C**	0.3574×10^{-5}	**D**	3.574×10^{5}
5.	The smallest number which is to be added to 725 to make it a perfect cube is:							
	A	9	**B**	4	**C**	3	**D**	2
6.	The value of m if 2m – 9 = 11							
	A	11	**B**	10	**C**	20	**D**	3
7.	A car travels 120 km in 3 hours. At the same speed, how far will it travel in 5 hours?							
	A	150 km	**B**	180 km	**C**	200 km	**D**	220 km
8.	Nithya scores 64 marks out of 80 in her Mathematics exam. Her marks in percentage is:							

	A	80%	**B**	75%	**C**	70%	**D**	85%
9.	The marked price of a cycle is ₹3500. It is sold for ₹2800. The discount % is:							
	A	15%	**B**	20%	**C**	25%	**D**	30%
10.	There are 25 students in a class. If 20% are absent on a particular day, the number of students present in the class is:							
	A	20	**B**	80	**C**	40	**D**	60
11.	The value of the expression $2x^2 + 4x$ if x= (-3)							
	A	6	**B**	-6	**C**	30	**D**	-30
12.	Factorize $15x^2y + 20x^3y$ by the method of common factor.							
	A	$5x^2y(3 + 4x)$	**B**	$3x^2y(5 + 4x)$	**C**	$xy(5 + 4x)$	**D**	$3x^2(5y + 4x)$
13.	Which of the following expressions has $(x + 4)$ as a factor?							
	A	$x^2 - 8$	**B**	$x^2 - 2$	**C**	$x^2 - 4$	**D**	$x^2 - 16$
14.	Which of the following points lie on the y-axis?							
	A	(7,0)	**B**	(0,3)	**C**	(7,1)	**D**	(3,1)
15.	The area of square with side (2x +y)							
	A	$2x^2 + 4xy + y^2$	**B**	$4x^2 + 4xy + y^2$	**C**	$x^2 + 2xy + y^2$	**D**	$2x^2 + y^2$
Q16.	Source based Question -5 Marks Two friends, Priya and Rohan, bought a rare book together for their school library. The total cost of the book (in dollars) is given by the expression m^2+10m +21, which is equal to the product of the amounts each of them contributed individually. 							
I	The total amount when m=50							
	A	771	**B**	1521	**C**	3021	**D**	171
II	Which of the following can be the individual shares?							
	A	(m+3) (m+7)	**B**	(m−3) (m+7)	**C**	(m+3) (m−7)	**D**	(m-3) (m−7)

III	What the sum of their shares?							
	A	2m+5	**B**	2m +10	**C**	2m−5	**D**	2m−10
IV	If they changed product of their shares as a^2 −10a −75, Which of the following can be their individual share?							
	A	(a−5) (a−15)	**B**	(a+5) (a+10)	**C**	(a+5) (a+15)	**D**	(a+5) (a−15)
V	The value of as a^2 −10a −75 when a= (-1)							
	A	64	**B**	-64	**C**	-86	**D**	86
Section B: Short Answer Questions (Type – 1) of **2** marks each (Q.17 to Q.21)								
17.	Factorise $16y^2 - 81z^2$ using suitable algebraic identity							
18.	The volume of a cube is 2197 m^3. Find the side of the cube.							
19.	A television set marked a price ₹25,000. If VAT at 8% is added, find the total amount to be paid.							
20.	Solve: 3(y-8) +6(y+5) = 4(y +4)							
21.	Sonale bought 35 packs of pens for ₹700. Dev bought 7 packs of the same type of pens. How much did Dev pay for it?							
Section C: Long Answer Questions (Type – 1) of **3** marks each (Q.22 to Q.27)								
22.	Express 2048 as a power 2.							
23	If 180 persons can finish a work in 40 days, how many persons are required to complete the same work in 24 days?							
24.	Plot the given points on a graph sheet: (2,4), (4,4), (3,0), (0,6)							
25	Factorise: $121y^2 - 66yz + 9z^2$							
26.	The sum of three consecutive numbers is 36. Find the numbers.							
27	Find the product by identity:$(\frac{3}{4}x^2 + 5)(\frac{3}{4}x^2 + 5)$							

Section D: Long Answer Questions (Type – 2) (Q.28 to Q.33)

& Case study (Q.34 &35) of **4** marks each

28. Simplify using the laws of exponents: $\frac{125\times5^4\times a^6}{5^3\times a^4}$

29. Factorise and divide: $12xy(9x^2-16y^2)\div 4xy(3x+4y)$

30. Akshaya borrowed ₹36,000 from a bank for 3 years at 6% per annum compound interest to set up a small cafe. Find the amount and compound interest to be paid at the end of 3 years.

31. Find the smallest natural number by which 53240 must be divided so that the quotient obtained is a perfect cube.

32. If two quantities x and y vary directly, Find the values of a, b, c, d.

x	8	a	16	c	10
y	24	42	b	54	d

33. Amit can ride a scooter constantly at a speed of 30kms/hour. Draw a time-distance graph for this situation. Use it to find

i) Time taken by Amit to ride 75 km .

ii) Distance covered by Amit in $3\frac{1}{2}$ hours.

Time (in hours)	1	2	3	4
Distance covered (in km)	30	60	90	120

34. **Case Study-1**

To enhance workplace skills, a tech company organized a **Hackathon Preparation Camp**. As part of this event, junior employees were given full responsibility to manage all arrangements under the mentorship of a senior manager. They handled venue booking, snack distribution, equipment setup, presentation scheduling, and decoration. This gave them real-world exposure to problem-solving, collaboration, and time management while applying mathematical logic in practical planning.

a) The venue setup was done by 12 employees in 18 hours. If the company wants it finished in 9 hours, how many employees are needed? (1m)

b) If 15 employees can configure all computers in 48 hours, how many employees are needed to do the same task in 30 hours? (1m)

c) A team of 6 employees managed handout distribution in 30 minutes. If only 3 employees are available, how long will they take for the same task? (1m)

d) 26 technicians can complete a server maintenance job in 18 days. If the job must be done in 13 days**,** how many more technicians must be hired? (1m)

35. Case Study-2

When a new movie was released on Friday, 150 seats were booked that day. The booking for the movie increased to 300 seats on Saturday

a) . What was the percent increase in the number of seats booked on Saturday? (1m)

b) The cost of a ticket for the show is ₹250. Ayush got a 20% discount on buying a ticket through online booking. How much rupees did Ayush pay for the ticket? (1m)

c) Outside the cinema hall, Neeraj has a stall that sells a pack of popcorn for ₹200. The government charges 18% GST on selling of goods or services. Find the price at which Neeraj sells popcorn including GST. (2m)

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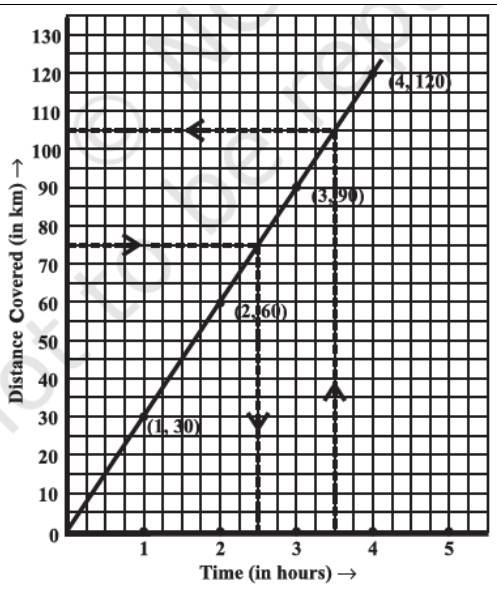
ANSWERS

Q1.	B
Q2.	A
Q3.	A
Q4.	B
Q5.	B
Q6.	B
Q7.	C
Q8.	A
Q9.	B
Q10.	A
Q11.	B
Q12.	A
Q13.	D
Q14.	B
Q15.	B
Q16.	I. C II. A III. B IV. D V. B
Q17.	$16y^2-81z^2=(4y)^2-(9z)^2=(4y-9z)(4y+9z)$
Q18.	Side length = $\sqrt[3]{2197}=13$ m
Q19.	Amount before VAT = ₹25,000 VAT = 8% of 25,000 = ₹2,000 Total amount = ₹25,000 + ₹2,000 = ₹27,000
Q20.	$3(y-8)+6(y+5)=4(y+4)$ $3y-24+6y+30=4y+16$ $9y+6=4y+16$ $5y=10$ implies y=2

Q21.	Cost of 35 packs = ₹700 Cost of 1 pack = 700÷35=20700÷35=20 Cost for 7 packs = 7×20=1407×20=140
Q22.	$2048=2^{11}$
Q23.	$P\times24=180\times40$ $P=\frac{180\times40}{24}=300$
Q24.	Graph Paper
Q25.	$(11y)^2-2(11y)(3z)+(3z)^2$ $=(11y-3z)^2$
Q26.	Let the three consecutive numbers be x,x+1,x+2 $x+(x+1)+(x+2)=36$ 3x=33 implies x=11
Q27.	$(\frac{4}{3}x^2+5)^2=\frac{16}{9}x^4+215x^2+25$
Q28.	$\frac{125\times54\times a6}{5^3\times a^4}=5^4\times a^2$ $=625a^2$
Q29.	$\frac{12xy(9x2-16y2)}{4xy(3x+4y)}=3(3x-4y)$
Q30.	$A=36000(1+\frac{6}{`100})^3$ Amount ≈ ₹42,876.58, Compound Interest ≈ ₹6,876.58.
Q31.	$53240=2^3\times5\times11^3$ So to make the quotient a perfect cube, divide by 5
Q32.	a=14, b=48, c=18, d=30
Q33.	i) Corresponding to 75 km on the vertical axis, we get the time to be 2.5 hours on the horizontal axis. Thus 2.5 hours are needed to cover 75 km . ii) Corresponding to $3\frac{1}{2}$ hours on the horizontal axis, the distance covered is 105 km on the vertical axis.

	
Q34.	a) 24 b) 24 c) 60 d) 10
Q35.	a) 100% b) ₹200 c) ₹236