

ATOMIC ENERGY CENTRAL SCHOOL NO. 2, MUMBAI

PERIODIC TEST - II

CLASS 08 - MATHEMATICS

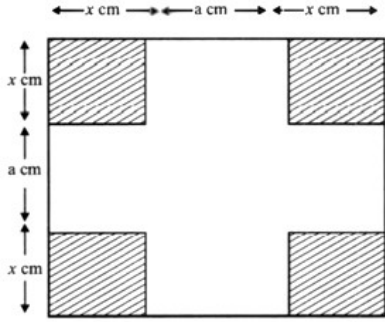
Time Allowed : 90 mins

Maximum Marks : 40

Section A		
1	Find the ratio of Rs 6 to 50 paise. a) None of these b) It is 12:1 c) It is 1:12 d) It is 1:30	[1]
2	Compound interest compounded annually on a certain sum of money for 3 years at 8% per annum is ₹ 1688.128. Find the simple interest on the same sum for the same rate and same period. a) ₹ 1560 b) ₹ 1600 c) ₹ 1650 d) ₹ 1500	[1]
3	$(-3x) \times (-5y + 2) = ?$ a) $6x$ b) $54xy$ c) $15xy$ d) $15xy - 6x$	[1]
4	$3y(2y - 7) - 3(y - 4) - 63 = ?$ a) $2y - 51$ b) $6y^2 - 24y - 51$ c) $6y^2 - y - 51$	[1]

	d) $y^2 - y - 51$	
5	The factors of $x^2 - 4$ are a) $(x - 2), (x - 2)$ b) $(x + 2), (x - 2)$ c) $(x + 2), (x + 2)$ d) $(x - 4), (x - 4)$	[1]
6	An irreducible factor of $24x^2 y^2$ is a) $24x$ b) x^2 c) y^2 d) x	[1]
7	The ratio of the volumes of two cubes is $1331 : 1728$. What is the ratio of their total surface areas? a) $21 : 23$ b) $121 : 144$ c) $121 : 225$ d) $8 : 11$	[1]
8	Assertion (A): The area of a rhombus is 150 sq. cm. Its diagonals are 15 cm and 20 cm. Reason (R): Area of rhombus = $\left(\frac{1}{2}\right) \times$ product of diagonals. 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.	[1]
9	If we subtract $-3x^2 y^2$ from $x^2 y^2$, then we get a) $-2x^2 y^2$ b) $4x^2 y^2$	[1]

	<p>c) $-4x^2y^2$</p> <p>d) $2x^2y^2$</p>											
10	<p>The value of expression $2a^2 + 2b^2 - ab$: for $a=1, b=2$ is</p> <p>(a) 18</p> <p>(b) 80</p> <p>(c) 12</p> <p>(d) 8</p>	[1]										
11	<p>Section B</p> <p>How much more per cent seats were won by X as compared to Y in assembly election in the state based on the data given below?</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Party</th> <th>Won (out of 294)</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>158</td> </tr> <tr> <td>Y</td> <td>105</td> </tr> <tr> <td>Z</td> <td>18</td> </tr> <tr> <td>W</td> <td>13</td> </tr> </tbody> </table>	Party	Won (out of 294)	X	158	Y	105	Z	18	W	13	[2]
Party	Won (out of 294)											
X	158											
Y	105											
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W	13											
12	Factorise the expression : $15xy - 6x + 5y - 2$	[2]										
13	Write the greatest common factor of the terms: $-18a^2, 108a$	[2]										
14	Find the volume of cube whose edge is $3x$.	[2]										
	Section C											
15	The cost of a water cooler in a shop is ₹ 3, 500. If 8% sales tax is charged, find the bill amount.	[3]										
16	Subtract $b(b^2 + b - 7) + 5$ from $3b^2 - 8$ and find the value of expression obtained for $b = -3$.	[3]										
17	<p>The formula for the area, A sq cm of the white cross is</p> <p>a) $A = 2ax + 4ay + a^2$</p> <p>b) $A = 4ax + 4ay + a^2$</p> <p>c) $A = 2ax + 2ay + a^2$</p>	[3]										

	 <p>d) $A = 4ax + a^2$</p>	
18	Factorise $p^2 + 14p + 13$.	[3]
	Section D	
19	Calculate the amount and compound interest on ₹ 10,800 for 3 years at $12\frac{1}{2}\%$ per annum compounded annually.	[5]
20	<p>A box contains a cylinder and a cube. The height and radius of cylinder is 7cm and 14cm respectively. It has been observed that side of cubical box is half the radius of cylinder.</p> <p>(i) What is the side of the cube? (a) 7cm (b) 14cm (c) cm (d) 28cm</p> <p>(ii) What is the CSA of cylinder? (a) 98 sq. cm (b) 616 sq. cm (c) 14 sq. cm (d) 7 sq. cm</p> <p>(iii) What is the volume of the cylinder? (iii) What is the volume of the cube? (a) 343 cu. cm (b) 49 cu. cm (c) 14 cu. cm (d) 7 cu. cm</p> <p>(iv) What is the difference between CSA of cylinder and LSA of cube? (a) 7 sq. cm (b) 196 sq. cm (c) 420 sq. cm (d) 616 sq. cm</p>	[5]