

ANANDALAYA PERIODIC TEST – 3 Class: VIII

Subject: Mathematics Date : 06 - 01 - 2025 M.M: 40 Time: 1Hr. 30 min.

(2)

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 General Instructions: i) This question paper contains 21 questions. All questions are compulsory. ii) This question paper is divided into 4 sections – A, B, C and D. iii) In Section-A, Questions 1 – 9 are multiple choice questions (MCQ's) each of 1 mark. iv) In Section-B, Questions 10 – 15 are very short-answer type questions carrying 2 marks each. v) In Section-C, Questions 16 – 20 are short -answer type questions carrying 3 marks each. vi) In Section D, Question 21 is a long answer type question carrying 4 marks. vii) There is no overall choice. However, an internal choice has been provided in 2 questions in Section-B and 2 questions in Section-C. viii) Question 21 in Section D is a case study-based question carrying 4 marks with subparts of values of 1, land 2 mark each respectively. 			
SECTION-A			
1.	The sum of $-7pq$ and $2pq$ is (A) $-9pq$ (B) $9pq$		(D) –5 <i>pq</i> (1)
2.	Which of the following is a binomial? (A) $7 \times a + a$ (B) $6a^2 + 7b + 3b^2$		(D) $6(a^2 + b)$ (1)
3.	The marked price of an article is ₹80 a (A) 5% (B) 95%	and it is sold at ₹76, then the (C) 10%	discount percent is (1) (D) appx. 11%
4.		(C) $24ab^2$	(1) (D) 24 <i>ab</i>
5.	If we subtract $-3x^2y^2$ from x^2y^2 , we (A) $-4x^2y^2$ (B) $-2x^2y^2$	e get (C) $4x^2y^2$.	(D) $2x^2y^2$ (1)
6.	Which of the following are like terms (A) $5xyz^2$, $-3xy^2z^2$ (C) $-5xyz^2$, $7xyz^2$? (B) $5xyz^2$, $5x^2yz^2$ (D) $5xyz^2$, $x^2y^2z^2$	(1)
7.	The volume of a cube whose edge is 3 (A) $27x^3$ (B) $9x^3$	$3x \text{ is} \$	(D) 3x ³ (1)
8.	The area of a rhombus is 240 cm ² . If (A) 30 cm (B) 15 cm	one diagonal is 16 cm, find t (C) 60 cm	he length of the other diagonal. (1) (D) 24 cm
9.	 A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct answer (1) out of the following options. (A): The base radius and height of a right circular cylinder are 14 cm and 5 cm respectively. Its curved surface area is 220 cm² (R): A curved surface area of a cylinder is obtained by multiplying the circumference of the base by the height of the cylinder. (A) Both A and B are true and B is the correct current surface area of A 		

- (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

SECTION-B

10. Find the selling price of a watch, if the marked price is ₹1200 and the discount is 12%.

11. The population of a town 2 years ago was 62500. Since some people migrate to different cities the (2) number of people decreases every year at the rate of 4% per annum, find the present population of the town.

OR

Mariam bought a magazine for ₹ 784 which included GST of 12%. What was the price of the magazine before GST was included?

- Find the product using suitable identities: 12.

(2)

(3)

a) $\left(\frac{2x}{3} - \frac{1}{2}\right)\left(\frac{2x}{3} + \frac{2}{3}\right)$. The cost of a chocolate is $\overline{\langle x + y \rangle}$ and Raghunath bought (3x - 5y + 7) chocolates. Write the (2) 13. expression for the total amount paid by him. Also, find the amount he paid if x = 10 and y = 5.

What should be added to 4c(-a + b + c) to obtain 3a(a + b + c) - 2b(a - b + c)?

- 14. The length, breadth and height of a cuboid are 20cm, 15cm and 10cm respectively. Find its total (2) surface area.
- 15. If the perimeter of a trapezium is 272 cm, its non-parallel sides are equal to 48 cm each and its (2) altitude is 16 cm, find the area of the trapezium.

SECTION-C

- 16. Find the compound interest on ₹48,000 for two years at 8% per annum when compounded (3) annually.
- Mahesh sells two tables for ₹ 3000 each. He gains 20% on one table and on the other he loses 20%. 17. (3) Find his gain or loss on whole transaction.
- Mary goes to a departmental store and buys cosmetics worth of ₹ 345; medicines worth of ₹250 (3) 18. and stationery worth of ₹ 170. If the sales tax is chargeable at the rate of 10% on cosmetics, 8% on medicines, 5% on stationary, find the total amount to be paid by Mary.

OR

Salim purchased 25 dozen bananas for ₹ 625. He spent ₹ 125 for transportation. He could not sell 5 dozen bananas as they were spoiled. He sold the remaining bananas at ₹ 30 for each dozen. Find his loss or profit percent.

19. Solve the following:

a) Add 9ax + 3by - cz and -5by + ax + 3cz. b) Subtract $6x^2 - 4xy + 5y^2$ from $8y^2 + 6xy - 3x^2$. c) Multiply (p + 6) and (q - 7).

The floor of a building consists of 3000 tiles which are rhombus shaped and each of its diagonals 20. (3)are 45 cm and 30 cm in length. Find the total cost of polishing the floor, if the cost per m² is ₹14.

OR

A builder has got a project to construct an office for a company. He placed the order for the material. The dimensions of each brick he bought is $25 \text{cm} \times 10 \text{cm} \times 8 \text{cm}$. He is planning to build a wall of 5m long, 3m high and 16cm thick. How many bricks will the builder have to buy to build the wall, assuming the volume of the sand and cement is negligible?

SECTION-D

- The villagers planned to construct a community place to hold Panchayat Samiti's Meetings in the (4) 21. village. The place has 14 cylindrical pillars. Each pillar has a base of radius 50 cm and a height 10m. Floor and roof are cuboids having dimensions $10 \text{ m} \times 10 \text{ m} \times 25 \text{ cm}$. The contractor said that the rate of construction of roof and floor is \gtrless 60 per m³ and the rate of painting is \gtrless 20 per m². The floor is tiled using square shaped tiles whose one side is 25cm.
 - a) Find the total lateral surface area of all the pillars which need to be painted.
 - b) Find the cost of painting the pillars.
 - c) What will be the cost of constructing the roof?

OR

c) How many tiles will be needed to tile the floor?