

ST. ARNOLD'S CENTRAL SCHOOL, PUNE
PERIODIC TEST-2, 2018-19
SUBJECT - MATHEMATICS

STD: VIII

MM : 50

SECTION - A

Question Numbers 1 to 5 carry 1 mark each.

1. Find the product of $a + b$, $8a^3b^3$ (1)
2. Find the value of $(3^0 - 2^0) + 3^1$ (1)
3. Express 3.02×10^{-6} in usual form. (1)
4. The population of a country and the area of land per person.
Is this a case of Direct or Inverse Proportion? (1)
5. Identify the coefficient of each term in the expression : $-y^3z^3 + 10x^2y$ (1)

SECTION - B

Question Numbers 6 to 10 carry 2 marks each.

6. Find the volume of a rectangular box whose length, breadth and height are $2xy$, x^2y and $3xy^2$ respectively. (2)
7. Simplify : $(\frac{1}{2})^{-4} + (\frac{1}{3})^{-2} + (\frac{1}{4})^{-3}$ (2)
8. If x varies directly as y and $x = 7$ and $y = 28$, find x , when y is 84. (2)
9. Express the following in standard form : (2)
 - i) Thickness of a piece of paper is 0.00013cm.
 - ii) The distance of the sun from the earth is 14960000000
10. A car travels 12km in 10 minutes. If the speed remains the same, how far can it travel in 4 hours? (2)

SECTION - C

Question Numbers 11 to 15 carry 3 mark each.

11. Find the value of m for which $(-4)^{m+1} \times (-4)^{-2} = -64$ (3)
12. Subtract $3a(a - b + c)$ from $4a(2c - a - b)$ (3)
13. In an army camp, there are 800 soldiers, there is enough food for them for 60 days. If 400 more soldiers arrive in the camp, how many days will the food last? (3)
14. Evaluate : $\frac{3^{-5} \times 10^{-5} \times 125}{5^{-7} \times 6^{-5}}$ (3)
15. Simplify : $2ab(a + b) - 3ab(a - b)$ and hence find its value when $a = 1$, $b = 2$ (3)

SECTION - D

Question Numbers 16 to 20 carry 4 mark each.

16. Show that : $(3x + 4y)^2 - 48xy = (3x - 4y)^2$ (4)

17. If a and b vary inversely, then complete the table : (4)

a	50	25	<input type="text"/>	20	<input type="text"/>
b	2	<input type="text"/>	10	<input type="text"/>	100

18. Using suitable identity, simplify : $\frac{215 \times 215 - 135 \times 135}{215 + 135}$ (4)

19. If 5 kg of sugar contains 2.25×10^7 crystals, how many sugar crystals are there in : (4)

- i) 2 kg of sugar
- ii) 1.5 kg of sugar

20. Using suitable identities, find : (4)

- i) $(2a - 3b)^2$
- ii) 105×107