KENDRIYA VIDYALAYA GACHIBOWLI, GPRA CAMPUS, HYD–32

PRACTICE PAPER 01 (2023-24)

Comparing Quantities & Algebraic Expressions and Identities

SUBJECT: MATHEMATICS **MAX. MARKS : 30**

CLASS : VIII **DURATION : 1 hr**

SECTION – A (1 mark)

1. The price of a motorcycle was Rs. 34,000 last year. It has increased by 20% this year. The price of motorcycle now is:
(a) Rs. 36,000 (b) Rs. 38,800 (c) Rs. 40,800 (d) Rs. 32,000

2. Waheeda bought an air cooler for Rs. 3300 including a tax of 10%. The price of the air cooler before VAT was added is:
(a) Rs. 2000 (b) Rs. 3000 (c) Rs. 2500 (d) Rs. 2800

3. The compound interest on Rs 50,000 at 4% per annum for 2 years compounded annually is
(a) Rs 4,000 (b) Rs 4,080 (c) Rs 4,280 (d) Rs 4,050

4. The value of $(x – y)(x + y) + (y – z)(y + z) + (z – x)(z + x)$ is:
(a) $x + y + z$ (b) $x^2 + y^2 + z^2$ (c) $xy + yz + zx$ (d) 0

5. Product of the following monomials $4p, – 7q^3, –7pq$ is
(a) $196\ p^2q^4$ (b) $196\ pq^4$ (c) $– 196\ p^2q^4$ (d) $196\ p^2q^3$

SECTION – B (2 marks)

6. A person goes shopping and spends 75% of his money. If he is now left with Rs. 600, find out how much he had in the beginning.

7. Simplify the following expressions:
(i) $x^2(x – 3y^2) – xy(y^2 – 2xy) – x(y^3 – 5x^2)$
(ii) $2x^2(x + 2) – 3x\ (x^2 – 3) – 5x(x + 5)$

8. Simplify: $\left(\frac{7}{9}a+\frac{9}{7}b\right)^2 - ab$

9. Simplify: $(a – b)\ (a^2 + b^2 + ab) – (a + b)\ (a^2 + b^2 – ab)$

10. In the year 2001, the number of malaria patients admitted in the hospitals of a state was 4,375. Every year this number decreases by 8%. Find the number of patients in 2003.

SECTION – C (3 marks)

11. Harshna gave her car for service at service station on 27-05-2023 and was charged as follows:
(a) 3.10 litres engine oil @ Rs 178.75 per litre and VAT @ 20%.
(b) Rs 2,095.80 as labour charges and service tax @10%.
(c) 3% cess on service Tax.
Find the bill amount.

12. The marked price of an article is Rs 500. The shopkeeper gives a discount of 5% and still makes a profit of 25%. Find the cost price of the article.

13. Simplify: (i) $\left(\frac{2x}{3}-\frac{2}{3}\right)\left(\frac{2x}{3}+\frac{2a}{3}\right)$ (ii) $(0.9p - 0.5q)^2$

14. Using identities, evaluate.
(a) 103^2 (b) 98^2 (c) 47 x 53

15. Multiply the following:
(i) $(x^2 – 5x + 6), (2x + 7)$ (ii) $(2x – 2y – 3), (x + y + 5)$