Multiple Choice questions

Q.1. During a discount sale, a mobile phone marked at ₹20000 available at ₹18400, the discount percentage is

A	10%	B	8%	C	12%	D	7%

Q.2. A rectangle has length (a +2b) and breadth (2a-3b). Area of rectangle is _____ sq. units

A	$2a^2 +ab - 6b^2$	B	$2a^2 -ab + 6b^2$	C	$a^2 +ab - 4b^2$	D	$2a^2 +3ab - b^2$

Q.3. The price of an article worth ₹ 2500 depreciates by 7%. The price after one year is

A	₹2505	B	₹2352	C	₹2235	D	₹2325

Q.4. The value of $725^2 - 625^2$ is:

A	135000	B	13500	C	1350	D	10350

Q.5. The least number to be multiplied with 3267 to make it as a perfect cube is:

A	3	B	11	C	9	D	33

Descriptive type questions

Q6. An LCD TV is available for ₹15,400 including GST. If the rate of GST is 10% find the price before tax was added.

Q7. Find the product of 2mn and $(p^2 - m^2)$ and find the value of the product if m= 2 n= (-1) and p = 3

Q8. Dev borrowed ₹20500 from his friend at 10% simple interest for 2 years. He lent this money to Raj at 20% rate for same duration but compounded annually. Find his gain after 2 years.

Q9. The present population of a town is 31250, if the annual increase in population is 4%, what will be the population of the town after 3 years?

Q10 The area of trapezium is 189cm^2. If the parallel sides are in the ratio 2:7 and the distance between them is 14cm, find the length of parallel sides.

Q11. Meenakshi cycles to her school at an average speed of 12km/hr. and takes 20 minutes to reach her school. (1) If she reaches the school in 12 minutes find her average speed.

	(2) if she cycles with a speed of 15km/hr. how much time will she take to reach the school?
Q12	From the sum of $6x^2 - 3x^2y + 5xy - 3y$ and $2x^2 + 7x^2y - 13xy + 8y$, subtract $-7x^2 - 8x^2y + 11xy + 4y$
Q13.	What should be subtracted from $3x^2 - 5x^2y + 11xy - 18$ to get $x^2 - 3x^2y - 4xy - 8$?
Q14	Simplify $6a - 3a^2 - (4a - 5a^2) + 2a - 7$
Q15.	Find the area of the square of side $(2x^2 - 3)$.
Q16.	Evaluate by identity: (1)102×98 (2) $164^2 - 136^2$
Q17.	Find the product using suitable identity: (i) $(\frac{3}{4}x + \frac{2}{5}y)(\frac{3}{4}x + \frac{2}{5}y)$ (ii) $(2x^2 - 3y^2)(2x^2 + 3y^2)$ (iii) $(x+3)(x-7)$ (iv) $(7a - 2b)(7a - 2b)$
Q18.	A plastic box 1.75m long, 1.25m wide and 75cm deep is to be made. It is opened at the top. Ignoring the thickness of the plastic sheet, determine the area of the sheet required for making the box.
Q19.	A car can finish a certain journey in 10 hours at the speed of 48km/hr. By how much speed should it be increased so that it may take only 6 hours to cover the same distance?
Q20	**CASE STUDY** Saritha wanted donate some amount to blind school, the amount donated is represented by $(x^2 + \frac{1}{x^2})$. Her friends wanted to know the amount she donated, she is not ready to disclose it but gave a hint the value of $x + \frac{1}{x}$ is 75, Based on the information answer the following questions. 1. Find the square of $x + \frac{1}{x}$ by using identity 2. Find the amount donated by Saritha. 3. Evaluate 203×205 by using identity. 4. Simplify and evaluate $3(x^2 - 2xy) + 5(xy + 1) - y^2$ if $x = (-2)$ and $y = 3$

ANSWERS

Q1. B	Q2. A	Q3. D	Q4. A
Q5 B	Q6 ₹14000	Q7 (-20)	Q8 ₹205
Q9. 35152	Q10 6cm &21cm	Q11 1. 20km/hr 2. 16 min	Q12 $15x^2 +12x^2 y -19xy +y$
Q13 $2x^2 - 2x^2y +15xy -10$	Q14 $4a + 2a^2 -7$	Q15 $4x^4 -12x^2+9$	Q16 1. 9996 2. 8400
Q17 $\frac{9}{16} x^2 +\frac{3}{5} xy + \frac{4}{25} y^2$ (ii)$4x^4 - 9y^4$ (iii)$x^2 -4x -21$ (iv) $49a^2 - 28ab +4b^2$	Q18 $6.6875m^2$	Q19 32km/hr	Q20 1.$x^2 +2 +\frac{1}{x^2}$ 2. ₹5623 3.41615 4. 14