Topic : Percentage & Profit & Loss question Bank

(Assingment-1)

1. What is 25% of 200?
2. If 40% of a number is 80, what is the number?
3. 75% of a number is 150. What is the number
4. What is 15% of 120?
5. If 30% of a number is 90, then the number is:\
6. The price of a product increases from ₹200 to ₹250. What is the percentage increase?\
7. A salary increases from ₹40,000 to ₹50,000. What is the percentage increase?\
8. The population of a town decreased from 10,000 to 8,000. What is the percentage decrease?\
9. A book's price drops from ₹500 to ₹400. What is the percentage decrease
10. If the cost price of an item is ₹600 and the selling price is ₹450, what is the percentage loss?\

11. ### **Section 3: Percentage Comparison**
12. Which is greater: 30% of 400 or 40% of 300?\
13. A person spends 60% of his income and saves ₹8,000. What is his total income?\
14. If A is 20% more than B, then B is how much less than A?\
15. If the price of sugar is increased by 25%, by how much should the consumption be reduced to maintain the same expense?\
16. If A’s income is 40% more than B’s income, then B’s income is what percentage less than A’s?\
17. The price of an item is increased by 20% and then decreased by 10%. What is the net percentage change?\
18. A number is increased by 30% and then decreased by 20%. What is the final percentage change?\
19. If the population of a city increases by 25% and then decreases by 20%, what is the net percentage change?\

20. If a price increases by 40% and then decreases by 30%, the final change is:\The salary of a person is first increased by 20% and then decreased by 10%. What is the overall percentage change?\
21. If an article is sold at a profit of 25%, then the selling price is what percentage of the cost price?\
22. A shopkeeper allows a discount of 10% on the marked price and still makes a profit of 8%. If the marked price is ₹500, what is the cost price?\
23. If the profit is 20% of the cost price, then what is the profit percentage on the selling price?
24. A product is marked at ₹1,200 and sold for ₹960. What is the percentage discount given?
25. If an article is bought for ₹500 and sold for ₹650, what is the percentage profit?
26. .If A's income is 20% more than B's, then B's income is what percentage less than A's?

27.If the ratio of boys to girls in a school is 3:2, what percentage of the total students are boys?

28 A city's population increased from 2,00,000 to 2,50,000 in 2 years. What is the percentage increase?

29 In an election, a candidate gets 65% of the total votes and wins by 3000 votes. How many total votes were cast?

30 The price of an article is reduced by 30%. By what percentage must the new price be increased to restore the original price?

31 If a number is increased by 50% and then decreased by 50%, what is the net percentage change?

32 If A is 20% taller than B, then B is shorter than A by:

33 If 30% of a number is 90, what is 60% of the same number?

34 A person spends 75% of his income and saves ₹5000. What is his total income?

35 The price of petrol increases by 20%. By what percentage should consumption be reduced to maintain the same expense?

36 The price of a TV was first increased by 20% and then decreased by 10%. What is the overall percentage change?

37 A shopkeeper marks an item 25% above the cost price and gives a 20% discount. What is his profit/loss percentage?

38 If the cost price of an article is ₹500 and it is sold at a loss of 20%, what is the selling price?

39 If a salary is increased by 10% and then decreased by 10%, what is the final percentage change?

40 A student needs 40% marks to pass. He gets 200 marks and fails by 20 marks. What are the total marks?

41 A man spends 20% of his salary on rent, 30% on food, and 10% on transport. If he saves ₹18,000, what is his salary?

42 The cost of an item is first increased by 30% and then decreased by 30%. What is the overall percentage change?

43 43) The population of a town increases by 10% every year. If the current population is 10,000, what will it be after 3 years?

44) If 15% of A is equal to 20% of B, then A:B is:

45) If the cost price of an item is ₹800 and the profit made is 25%, what is the selling price?

46) If the cost price (CP) of an item is ₹200 and the selling price (SP) is ₹250, what is the profit percentage?

47) A man sells an article for ₹720 at a profit of 20%. Find the cost price.

48) A shopkeeper sells an item at a loss of 15%. If the cost price is ₹500, find the selling price.

49) A man purchased a cycle for ₹1500 and sold it at a loss of 10%. What was the selling price?

50) A trader marks his goods at 30% above the cost price and allows a discount of 10%. What is his gain percen

(ASSIGNMENT - 1)
(Aptitude)

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(1) $\frac{25}{100} \times 200 = 50$ Ans

(2) $40\% + 40\% + 20\% = 100\%$
$80 + 80 + 40 = 200$ Ans

(3) $\frac{75}{100} = \frac{150}{x} \Rightarrow 75x = 150 \times 100$
$75x = 15000$
$x = \frac{15000}{75}$
$x = 200$ Ans

(4) $100 \rightarrow 15\% \Rightarrow 15$
$10 \rightarrow 15\% \rightarrow 1.5$
$10 \rightarrow 15\% \rightarrow 1.5$
18

~~15~~ 3×6
~~10~~
~~5~~
$= 18$ Ans

(5) $\frac{30}{100} = \frac{90}{x} \Rightarrow 30x = 900$
$x = \frac{9000}{30}$
$x = 300$ Ans

(6) $200 \rightarrow 250$
$\Rightarrow 250 - 200 = 50$ increase.
$= \frac{50}{100} = \frac{1}{4} = 25\%$ Ans

(7) 1st Salary $\rightarrow$ Rs 40,000
2nd $\rightarrow$ Rs 50,000
$\Rightarrow$ 2nd - 1st $\rightarrow$ 10,000 increase.

$\frac{10,000}{40,000} = \frac{1}{4} =$ 25% increase.

(8) $\frac{2000}{10000} = \frac{1}{5} =$ 20% decrease.

(9) $\frac{100}{500} = \frac{1}{5} =$ 20% decrease.

(10) CP = 600 SP = 450 loss = RS150

$\frac{150}{600} \times 100 = \frac{1}{4} \times 100 = \frac{100}{4} =$ 25% loss

(11) $\frac{80}{100} \times 400$ or $\frac{40}{100}$ of 300

$\frac{30}{100} = \frac{x}{400}$ $\frac{40}{100} \times 300 = x$

$120 = x$

$30 \times 400 = 100x$

$120 = x$

$100 \times 4 = 400$

$30 \times 4 = 120$

$100 \times 3 = 300$

$40 \times 3 = 120$

Same

Both are equal

(12) 60 % of income saves Rs 8000
total incom ?

$$\frac{40}{100} = \frac{8000}{x}$$

$$40x = 800000$$

$$x = \frac{800000}{40}$$

$$x = 20000$$

(13) A + 20 % = B

$B = 100$

$\therefore A = 120$

$$\frac{20}{120} = \frac{1}{6} = 16.67\ \%$$

(14) $100 \xrightarrow[25\%]{} 125 \xrightarrow{25} 100$

$$\frac{25}{125} \times 100 = \frac{1}{5} \times 100 = 20\ \%$$

(15) $A \xrightarrow[40\%]{} B \Rightarrow 100 \rightarrow 140 \xrightarrow{40} 100$

$$\frac{40}{140} \times 100 = \frac{2}{7} \times 100 = 28.57\ \%$$

(16) $100 \rightarrow 120 \rightarrow (120 - 12) \rightarrow 108$

$\therefore$ 8 % increase

(17) $100 \xrightarrow{30\%} 130 \xrightarrow{20\%} (130-26) \rightarrow 104$

4% increase

(18) $100 \xrightarrow{25\%} 125 \xrightarrow{20\%} (125-25) \rightarrow 100$

$= 0\%$

(19) $100 \xrightarrow{40\%} 140 \xrightarrow{-30\%} (140-42) \rightarrow 98$

2% decrease

(20) $100 \xrightarrow{+20\%} 120 \xrightarrow{-10\%} 108$

8% increase

(21) $100 \xrightarrow{25} 125$

$\frac{25}{100} \times 100 = 125\%$

(22) $500 \xrightarrow{-10\%} 450$

$: 420$

(23) $100 \xrightarrow{20\%} 120$

$\frac{20}{120} \times 100 = 16.67\%$

(24) 1200 → 960

$\Rightarrow 1200 - 960 = 240 \Rightarrow \frac{240}{1200} \times 100 = \frac{2}{10} \times 100$

$= 20\%$.

(25) 500 → 650

$650 - 500 = 150$

$\frac{150}{500} \times 100 = \frac{300}{10} = 30\%$.

(26) 3 + 20% = A

100 → 120 → 100
B A B

$= \frac{20}{120} \times 100 = 16.67\%$.

(27) $\frac{B}{6} = \frac{3}{2}$ $\frac{3}{3+2} = \frac{3}{5} \times 100 = \frac{300}{5} = 60\%$.

(28) 2100,000 → 2,50,000

25-% increase.

(29) $\frac{65}{65-35} = 30\% = 3000$

$\frac{30}{3000} = \frac{100}{x} = 10,000$

(30) $100 \xrightarrow{-30\%} 70\% \rightarrow 100$

$\frac{30}{70} \times 100 = \frac{300}{7} = 42.85\%$

(31) $100 \xrightarrow{+50\%} 150 \xrightarrow{-50\%} 75 = -25\%$.
(original)

(32) $100 \xrightarrow{+20\%} 120 \rightarrow 100$
B A

$= 16.67\%$.

(33) $\frac{30}{90} = \frac{60}{x} = 180$

(34) Spends 75%.
remaining income = 25%.
Save Rs 5000
total income ?

$\frac{25}{5000} \times \frac{75}{x} = 15,000$ Spends

(35) $100 \xrightarrow{+20\%} 120 \rightarrow 100$

$\frac{20}{120} \times 100 = 16.67$

(36) $100 \xrightarrow{+20\%} 120 \xrightarrow{-10\%} (120-12) \rightarrow 108$

8% increase.

(37) $100 \xrightarrow[CP]{} \xrightarrow{+25\%} 125 \xrightarrow{-20\%} (125-25) = 100$

0%.

(38) $100 \xrightarrow{+10\%} 110 \xrightarrow{-10\%} (110-11) \rightarrow 99$

1% decrease.

(40) $200 + 20 = 220 \quad -40\%.$

$$\frac{220}{40} = \frac{x}{100} = 550$$

(41) $20\% + 30\% + 10\% = 60\%.$

$40\% \rightarrow 18000$

$$\frac{18000}{40} = \frac{x}{100} \quad ; \quad \frac{900}{2} = \frac{x}{100} \quad ; \quad \frac{90,000}{2} = x$$

$x = 45,000$

(42) $100 \xrightarrow{+30\%} 130 \xrightarrow{-30\%} (130-39) \rightarrow 91$

-9% decrease

(43) 18. 810.

(44) 15% of A = 20% of B

$\frac{15}{100} A = \frac{20}{100} B$

$\frac{15A}{100} = \frac{20B}{100} \Rightarrow 15A = 20B$

$\frac{A}{B} = \frac{20}{15} = 4:3$ | 4/3

(45) $800 \xrightarrow{+25\%} (800 + 200) \rightarrow 1000$

(46) CP → SP, 25%
200 250

(47) 600

(48) 425

(49) $1500 \xrightarrow{-10\%} 1350$

(50) $100 \xrightarrow{+30\%} 130 \xrightarrow{-10\%} 117 \Rightarrow 17\%$ gain