

Aptitude Assignment-1
Topic-- Percentage & Profit & Loss question Bank
Name- Gourav Sahu_KH
PRN No-250240320039

1. What is 25% of 200?

- a) 25
- b) 50
- c) 75
- d) 100

Solution :- 1

$$\frac{200 \times 25}{100} = 50$$

option (b) Aws

2. If 40% of a number is 80, what is the number?

- a) 100
- b) 150
- c) 200
- d) 250

Solution 2 :-

Let no. = x

$$40\% \text{ of } x = 80$$
$$\frac{40}{100} \times x = 80$$
$$x = \frac{80 \times 5}{2}$$
$$x = 200$$

Aws

3. 75% of a number is 150. What is the number?

- a) 175
- b) 200
- c) 225

d) 250

Solution ③ :-

$$75\% \text{ of } x = 150$$

$$\frac{3}{4} \times x = 150$$

$$x = \frac{150 \times 4}{3}$$

option (b)

$$x = 200$$

Ans

4. What is 15% of 120?

- a) 12
- b) 15
- c) 18
- d) 20

Date: ___/___/___

Solution ④ :-

$$\frac{3}{4} \times 120 = 18$$

option (c)

5. If 30% of a number is 90, then the number is:

- a) 200
- b) 250
- c) 300
- d) 350

Solution (5) :-

$$\frac{30}{100} \times x = 90 - 30$$

$$x = 500 \text{ Ans}$$

option (c)

6. The price of a product increases from ₹200 to ₹250. What is the percentage increase?

- a) 20%
- b) 25%
- c) 30%
- d) 35%

Solution (6) :-

Increased from 200 to 250

$$\frac{25}{100} \times 200 = 25\% \text{ Ans}$$

option (b)

7. A salary increases from ₹40,000 to ₹50,000. What is the percentage increase?

- a) 20%
- b) 25%
- c) 30%
- d) 35%

Solution (7) :-

Increased from 40000 to 50000

$$\frac{10000}{40000} \times 100 = 25\% \text{ Ans}$$

option (b)

8. The population of a town decreased from 10,000 to 8,000. What is the percentage decrease?

- a) 10%
- b) 15%
- c) 20%
- d) 25%

Date: ___/___/___

Solution ⑧ :-

Decreased from 10000 to 8000

$$\frac{2000}{10000} \times 100 = 20\% \quad \underline{\text{Ans}}$$

option (c)

9. A book's price drops from ₹500 to ₹400. What is the percentage decrease?

- a) 10%
- b) 15%
- c) 20%
- d) 25%

Solution ⑨ :-

Decreased from 500 to 400

$$\frac{100}{500} \times 100 = 20\% \quad \underline{\text{Ans}}$$

option (c)

10. If the cost price of an item is ₹600 and the selling price is ₹450, what is the percentage loss?

- a) 20%
- b) 22.5%
- c) 25%
- d) 30%

Solution (10) :-

(i) $CP = 600$
 $SP = 450$
 $Loss = 150$

$$\text{Loss \%} = \frac{150}{600} \times 100 = 25\% \quad \underline{\text{Ans}}$$

option (c)

(d) ~~not go~~

1. ### **Section 3: Percentage Comparison**

11. Which is greater: 30% of 400 or 40% of 300?

- a) 30% of 400
- b) 40% of 300
- c) Both are equal
- d) Cannot be determined

Solution (11) :-

$$30\% \text{ of } 400 \\ 30 \times 400 \\ 120$$

$$10\% \text{ of } 300 \\ 10 \times 300 \\ 120$$

equal

option (c)

12. A person spends 60% of his income and saves ₹8,000. What is his total income?

- a) ₹15,000
- b) ₹18,000
- c) ₹20,000
- d) ₹25,000

Solution (12) :-

He spends 60% of Income
40% is saving = 8000

Let income is x

$$40\% \text{ of } x = 8000$$

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

$$x = 20000 \quad \underline{\text{Ans}}$$

option (c)

13. If A is 20% more than B, then B is how much less than A?

- a) 20%
- b) 16.67%
- c) 25%
- d) 10%

Solution (13) :-

Let $B = 100$
So A is 20% more than B
 $A = 120$
B is 20 less than A

$$\frac{20}{120} \times 100 = 16.67\% \quad \underline{\text{Ans}}$$

option (b)

14. If the price of sugar is increased by 25%, by how much should the consumption be reduced to maintain the same expense?

- a) 20%
- b) 25%
- c) 30%
- d) 15%

Solution (14) :-

Let previous price = 100/kg.
previous consumption = 100 kg.

Total Expense $\Rightarrow 100 \times 100 \Rightarrow 10000$ Rs.

Increased price is $\frac{125}{100} \times 100 \Rightarrow 125$ Rs/kg

Let New consumption is x

New Expense $\Rightarrow 125x = 125x$ Rs.

$125x = 10000$

$x = 80$ kg.

Reduced consumption percentage \Rightarrow

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

option (a) - r.e

15. If A's income is 40% more than B's income, then B's income is what percentage less than A's?

- a) 28.57%
- b) 30%
- c) 33.33%
- d) 40%

Solution 15

Let B income is 1000 \Rightarrow
so A income will 1400 \Rightarrow

B's income is \$100 less than A's income.

$$\text{less } \therefore = \frac{200}{\begin{array}{r} 100 \\ + 100 \\ \hline 200 \end{array}} \times 100$$

$$\therefore \frac{200}{7} 0.2857\% \text{ Ans}$$

0.01 x option (a)

option (a)

16. The price of an item is increased by 20% and then decreased by 10%. What is the net percentage change?

- a) 8% increase
 - b) 8% decrease
 - c) 10% increase
 - d) 10% decrease

Solution 16 :-

Item price increased 20% then decreased 10%.

Let first price was 100 rs

cutter 20°. increment $\rightarrow \frac{120}{100} \times 100$
 $\Rightarrow 120$ mm

$$\text{after } 10^7 \text{. generation} \rightarrow \frac{9\%}{10\%} \times 12\% \rightarrow 10.8 \text{ %}$$

So the net charge is increment of 8 s.

$\frac{8}{100} \times 100 = 8\% \text{ Increase}$

option (a)

17. A number is increased by 30% and then decreased by 20%. What is the final percentage change?

- a) 4% increase
- b) 8% increase
- c) 10% increase
- d) 12% increase

Solution (17) :-

Let Previous no. $\rightarrow 100$

after increment by 30% $\rightarrow \frac{130}{100} \times 100$
 $\Rightarrow 130$

after decrement by 20% $\rightarrow \frac{80}{100} \times 130$
 $\Rightarrow 104$

So the net change % is

$\frac{4}{100} \times 100 = 4\%$ increased

option (a)

18. If the population of a city increases by 25% and then decreases by 20%, what is the net percentage change?

- a) 0%
- b) 5% increase
- c) 10% decrease
- d) 5% decrease

Solution (18) :-

Let population was 1000

Increment by 25% $\Rightarrow \frac{125}{100} \times 1000$

$\rightarrow 1250$

Decrement by 20% $\Rightarrow \frac{80}{100} \times 1250 = 1000$

So there will be no change - 0%.

option (a)

19. If a price increases by 40% and then decreases by 30%, the final change is:

- a) 2% increase
- b) 10% increase
- c) 10% decrease
- d) 2% decrease

Solution (19) :-

Let the price was 100 rs.
after 40% increment $\rightarrow \frac{140}{100} \times 100 \rightarrow 140$ rs.

after 30% decrement $\rightarrow \frac{70}{100} \times 140 \rightarrow 98$ rs

so net change % ?

$$\frac{2}{100} \times 100 = 2\% \text{ decrement}$$

option (d)

Ans

20. The salary of a person is first increased by 20% and then decreased by 10%. What is the overall percentage change?

- a) 8% increase
- b) 10% increase
- c) 10% decrease
- d) No change

Solution (20) :-

Let salary was ₹10000/-

After increment by 20% $\rightarrow \frac{120}{100} \times 10000$

$$\Rightarrow ₹12000/-$$

After decrement by 10% $\rightarrow \frac{90}{100} \times 12000$

$$\Rightarrow ₹10800/-$$

So, the net change % is

$$\frac{800}{10000} \times 100 = 8\% \text{ increase}$$

option (a)

21. If an article is sold at a profit of 25%, then the selling price is what percentage of the cost price?

- a) 100%
- b) 125%
- c) 150%
- d) 175%

Solution (21) :-

Let the CP of article = ₹100/-

profit is 25%.

$$SP = 125$$

Let x% of CP = SP

$$\frac{x}{100} \times 100 = 125$$

$$x = 125\% \quad \text{Ans.}$$

option (b)

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?

- a) ₹400

- b) ₹420
- c) ₹450
- d) ₹460

Solution (22) :-

~~MP = ₹ 500~~

so the SP after 10% discount
 $\frac{90}{100} \times 500 \Rightarrow 450$ ₹

still 8% profit so

$$\frac{108}{100} \times CP = 450$$

$$CP = 416.67$$
 ₹ Aw.

There are no options / but this
 is the right answer.

23. If the profit is 20% of the cost price, then what is the profit percentage on the selling price?

- a) 16.67%
- b) 18%
- c) 20%
- d) 22%

Solution (23) :-

Let CP = 100
 profit is 20%.
 $100 \times SP = 120$

Profit % on SP

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

option (a)

24. A product is marked at ₹1,200 and sold for ₹960. What is the percentage discount given?

- a) 15%
- b) 20%
- c) 25%
- d) 30%

Solution (24) :-

$$MP = 1200 \text{ रुपये}$$

$$SP = 960 \text{ रुपये}$$

$$\text{Discount} = 240 \text{ रुपये}$$

$$\text{Discount \%} = \frac{240 \times 100}{1200} = 20\% \text{ Ans}$$

option (b)

25. If an article is bought for ₹500 and sold for ₹650, what is the percentage profit?

- a) 20%
- b) 25%
- c) 30%
- d) 35%

Solution (25) :-

$$CP = 500 \text{ रुपये}$$

$$SP = 650 \text{ रुपये}$$

$$\text{Profit} = 150 \text{ रुपये}$$

$$\text{Profit \%} = \frac{150 \times 100}{500} = 30\% \text{ Ans}$$

option (c)

26. If A's income is 20% more than B's, then B's income is what percentage less than A's?

- a) 16.67%
- b) 18%
- c) 20%
- d) 25%

Solution (26) :-

$$\text{Let B's income} = 10000 \text{ rs}$$

A's income 20% more than B's income

$$\text{A's income} \Rightarrow \frac{120}{100} \times 10000 = 12000 \text{ rs.}$$

less % of B's income than A's

$$\frac{2000}{12000} \times 100 = 16.67\% \text{ Ans}$$

option (a)

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

- e) 30%
- f) 40%
- g) 50%
- h) 60%

Solution (27) :-

$$\text{ratio: } \frac{\text{boys}}{\text{girls}} = \frac{3}{2}$$

so let boys = 300

girls = 200

Total = 500

% of total boys

$$\frac{300}{500} \times 100 = 60\% \text{ Ans}$$

option (h)

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

- a. 20%
- b. 25%
- c. 30%
- d. 35%

Solution (28) :-

Previous population = 1200000

New population = 250000

$$\text{Increase \%} = \frac{50000}{200000} \times 100 = 25\%$$

Ans

option (b)

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

- a. 5000
- b. 6000
- c. 8000
- d. 9000

Solution (29) :- Let total votes $\Rightarrow x$

$$\frac{65}{100}x - \frac{35}{100}x = 3000$$

$$\frac{13}{20}x - \frac{7}{20}x = 3000$$

$$\frac{6}{20}x = 3000$$

$$x = \frac{3000 \times 20}{6}$$

$$x = 10000 \quad \text{Ans}$$

This is the correct answer.

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

- a. 30%
- b. 42.85%
- c. 50%
- d. 60%

Solution (30) :-

Let previous price was 100 Rs.
reduced by 30% :-

$$\frac{70}{100} \times 100 = 70 \text{ Rs}$$

Now let we have to increase $x\%$ to match original value

$$70 + \frac{x}{100} \times 70 = 100$$

$$\frac{7x}{10} = 30$$

$$x = \frac{300}{7}$$

$$x = 42.85\% \quad \underline{\text{Ans.}}$$

option (b)

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

- a. 0%
- b. 25% decrease
- c. 50% decrease
- d. 75% decrease

Solution (31) :-

Let the no. is 100

$$\text{Increased by } 50\% \rightarrow \frac{150}{100} \times 100 = 150$$

$$\text{Decreased by } 50\% \rightarrow \frac{50}{100} \times 150 = 75$$

So % change percentage is

$$\frac{25}{100} \times 100 = 25\% \text{ decrease}$$

option (b)

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

- a. 16.67%
- b. 18%
- c. 20%
- d. 25%

Date: _____

Solution (32) :-

Let B is 100 cm tall.

A is 20% more than B so A \rightarrow $\frac{120}{100} \times 100 = 120$ cm

Percentage of B shortness than A is $\frac{20}{120} \times 100 = 16.67\%$

option (a)

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

- a. 120
- b. 150
- c. 180
- d. 200

Solution (33) :-

Let no. is x .

$$\frac{30}{100} \times x = 90$$
$$x = 300$$

Now $\frac{60}{100} \times 300 = 180$

option (c)

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

- a. ₹15,000
- b. ₹18,000
- c. ₹20,000
- d. ₹25,000

Solution 34 :-

Let income is x
He spends 75% of Income and
saves 5000

so, 25% of income = 5000

$$\frac{25}{100} \times x = 5000$$
$$x = 20000$$

Ans

option (c)

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

- a. 16.67%
- b. 18%
- c. 20%
- d. 25%

Solution (35) :-

Let previous petrol price = 100 Rs/litre
previous consumption = 100 litres

$$\text{Total Expense} = 100 \times 100 = 10000 \text{ Rs}$$

Price increased \Rightarrow 120 Rs/litre

Let new consumption is x

$$\text{So, } 120 \times x = 10000$$

$$x = 83.33 \text{ litres}$$

reduction percentage: $\frac{16.67}{100} \times 100$

$$= 16.67\% \quad \underline{\text{A}}$$

option (a)

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

- a. 8% increase
- b. 10% increase
- c. 10% decrease
- d. No change

Solution (36) :- Let 1st price was 1000 Rs

20% increased price $\rightarrow \frac{120}{100} \times 1000 = 1200 \text{ Rs}$

10% decreased price $\rightarrow \frac{90}{100} \times 1200 = 1080 \text{ Rs}$

change percentage $\rightarrow \frac{80}{1000} \times 100 = 8\% \text{ increase}$

$\frac{80}{1000} \times 100 = 8\% \text{ increase}$

option (a)

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

- a. 0%
- b. 2% profit
- c. 5% profit
- d. 10% loss

Solution (37) :-

Let CP = 100 Rs

So MP $\Rightarrow \frac{125}{100} \times 100 = 125$ Rs

Discount given 20% $\Rightarrow \frac{80}{100} \times 125 = 100$ Rs

So SP = 100 Rs
and CP = 100 Rs

No profit No loss

option (d)

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

- a. ₹350
- b. ₹375
- c. ₹400
- d. ₹450

Solution (38) :-

CP = 500

Loss = 20%

SP $\Rightarrow \frac{80}{100} \times 500 = 400$ Rs

option (c)

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

- a. 0%
- b. 1% decrease
- c. 1% increase
- d. 2% decrease

Solution (39) :- Let salary is 1000 Rs

$$10\% \text{ increased} \rightarrow \frac{110}{100} \times 1000 = 1100 \text{ Rs}$$

$$10\% \text{ decreased} \rightarrow \frac{90}{100} \times 1100 = 990 \text{ Rs}$$

$$\text{change} \rightarrow \frac{-10}{1000} \times 100 = 1\% \text{ decreased}$$

An
option (b)

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

- a. 500
- b. 550
- c. 600
- d. 650

Solution (40) :- He got 200 marks and failed by 20 marks.
That means 220 is passing.
So,

* Let total marks = x

$$40\% \text{ of } x = 220$$

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

$$x = 550$$

An, P
option (b)

- 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?

- a. ₹40,000
- b. ₹45,000
- c. ₹50,000
- d. ₹55,000

Solution 41 :- Let the salary x Rs.

Remaining \rightarrow rent 20%

30% \rightarrow food

10% \rightarrow transport

60% \rightarrow Total

remaining $40\% \rightarrow 18000$

$$\frac{40}{100} \times x = 18000$$

$$x = 45000 \text{ Rs. Ans}$$

option (b)

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

- a. 0%
- b. 9% decrease
- c. 9% increase
- d. 15% decrease

Solution 42 :- Let price was 100 Rs

30% increased $\rightarrow \frac{130}{100} \times 100 = 130$ Rs

30% decreased $\rightarrow \frac{70}{100} \times 130 = 91$ Rs

change percentage $\frac{9}{100} \times 100 = 9\%$ decreased

$\frac{9}{100} \times 100 = 9\%$ decreased Ans

option (b)

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?

- a) 13,310
- b) 13,500
- c) 14,000
- d) 14,200

Solution 43 :-

Current population $\Rightarrow 10000$

- 1st year

$$\frac{110}{100} \times 10000 = 11000$$

$$2^{\text{nd}} \text{ year} \rightarrow \frac{110}{100} \times 11000 \Rightarrow 12100$$

$$3^{\text{rd}} \text{ year} \rightarrow \frac{110}{100} \times 12100 = 13310$$

population $\Rightarrow 13310$ Ans

option (a)

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

- a) 3:4
- b) 4:3
- c) 3:5
- d) 5:3

Solution 44 :-

$$\frac{3}{100} A = \frac{4}{100} B$$

$$\frac{A}{B} = \frac{4}{3}$$

ratio \rightarrow A : B

$$4 : 3$$

option (b)

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

- a) ₹900
- b) ₹1000
- c) ₹1050
- d) ₹1100

Solution 45 :-

$$CP = 800$$

$$\text{profit} = 25\%$$

$$SP = \frac{125}{100} \times 800 = 1000 \text{ Rs}$$

option (b)

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

- a) 20%
- b) 25%
- c) 30%
- d) 40%

Solution 46 :-

Cost CP = ₹200
 SP = ₹250
 $\therefore \text{Profit} = ₹50$

$\text{Profit \%} = \frac{50}{200} \times 100 = 25\%$ Ans.
 (b) option (b)

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

- a) ₹600
- b) ₹620
- c) ₹650
- d) ₹700

Solution 47 :- SP = ₹720 Rs
 $\text{Profit} = 20\%$

To find CP →

$$\frac{120}{100} \times CP = 720$$

$$CP = 600 \text{ Rs. Ans.}$$

Option (a)

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

- a) ₹400
- b) ₹425
- c) ₹450
- d) ₹475

Solution 48 :- CP = ₹500
 $\text{Loss} = 15\%$

$$SP \rightarrow \frac{85}{100} \times 500 = 425 \text{ Rs. Ans.}$$

Option (b)

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

- a) ₹1200
- b) ₹1300
- c) ₹1350
- d) ₹1400

Solution (49) :-

$$CP = 1500$$

$$\text{Loss} = 10\%$$

$$SP \rightarrow \frac{90}{100} \times 1500 = 1350 \quad \text{Ans}$$

(d) Option (c)

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

- a) 17%
- b) 18%
- c) 19%
- d) 20%

Solution (50) :-

$$\text{Let } CP = 100 \text{ Rs}$$

So MP is 30% above

$$MP = \frac{130}{100} \times 100 = 130 \text{ Rs.}$$

discount is 10%

$$\text{So } SP = \frac{90}{100} \times 130 = 117 \text{ Rs.}$$

profit $\Rightarrow 17 \text{ Rs.}$

$$\text{profit \%} \rightarrow \frac{17}{100} \times 100 \Rightarrow 17\% \quad \text{Ans.}$$

Option (a)