GAURAV RATHOD 8/03/2025

Topic percentage & profit & loss
question bank solution

deadline 10/ MARCH /2025

(1) sol 25% of 200

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

Ans ⇒ (b) 50

(2) $\frac{x \times 40}{100} = 80$

$x = \frac{80 \times 100}{40}$

$x = 200$

Ans ⇒ (c) 200

(3)

$\frac{x \times 75}{100} = 150$

$\Rightarrow \frac{150 \times 100}{75}$

$\Rightarrow 200$

Ans ⇒ (b) 200

(4)

$\frac{15}{100} \times 120$

$\frac{100}{10} \Rightarrow 18$

Ans ⇒ c) 18

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(5) $\frac{x \times 30}{100} = 90$

$\Rightarrow \frac{3}{\cancel{90} \times 100}{\cancel{30}}$

Ans ⇒ (c) 300

(6) 200 → 250 ↑

Profit ⇒ 50

% profit = $\frac{\cancel{50} \times 100}{\cancel{200}}$ 25

⇒ 25%

Ans ⇒ b 25%

(7) 40K → 50K ↑ increase 10K ↑

% increase = $\frac{10\cancel{K} \times 100}{\cancel{40K}}$

⇒ 25%

Ans ⇒ (b) 25%

(8) 10K → 8K

decrease 2K ↓

% of decrease = $\frac{2\cancel{K} \times 100}{10\cancel{K}}$

⇒ 20%

Ans ⇒ (c) 20%

(9) ₹ 500 → ₹ 400

decrease ₹ 100 ↓

% of decrease ⇒ $\frac{100 \times 100}{500}$ ⇒ 20%

Ans ⇒ (c) 20%

(10) ₹ 600 → ₹450 ↓
purcase sell

loss = ₹150 ↓

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

Ans ⇒ (c) 25%

1. ###

* section : 3 percentage Comparison

(11) 30% of 400 or 40% of 300

$\frac{30}{100} \times 400^{4}$ $\frac{40}{100} \times 300^{3}$

120 120

Ans ⇒ (c) Both are equal

(12) $\frac{x \times 60}{100} =$

spend 60% of his income

40% of his income is saving.

$x \times 40\% = 8000$

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

$x = 20000$

Ans ⇒ (c) ₹ 20,000

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(13) ~~B +~~

~~A +~~ = B

If B = 100

A = 120

Suppose

B = 100

A = 120

$\Rightarrow \frac{20}{120} \times 100$

$\Rightarrow \frac{1}{6} \times 100$

$\Rightarrow 16.67$

~~If~~ If A is 100, it is 20% ~~more than~~ B

B is $\Rightarrow 100 - \frac{100 \times 20}{100} \Rightarrow 80$

~~A = 100~~

~~B = 80~~

$\Rightarrow \frac{20}{80} \times 100 \Rightarrow 25$

B ~~is~~ 25% ~~less than~~ A

Ans $\Rightarrow$ ~~(c) 25% ↓~~ (b) 16.67 ↓

(14)

quantity x

Price y

$xy = x \times y$

$xy = (x + x \times 25\%)(y - y \times i)$

$xy = xy\left(1 + \frac{25}{100}\right)(1 - i)$

$1 = \frac{125}{100}(1 - i)$

$100 = 125 - 125i$

$+25 = +125i$

$i = \frac{1}{5} \times 100 \Rightarrow 20\%$

Ans $\Rightarrow$ (a) 20% ↓

$\frac{3}{}$

$\Rightarrow \frac{200}{3} \Rightarrow$

(15)

Ans ⇒ solution :- B → 100

A → 140

$\Rightarrow \frac{40 \times 100}{140}$

$\Rightarrow \frac{200}{7} \Rightarrow 28.57\%$

Ans ⇒ (a) 28.57% ↓

(16) ~~Pri~~ ⇒ 100

↑ 20% ⇒ 120%

↓ 10% ⇒ 108

Ans ⇒ (a) 8% increase

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(17) solution :-

NUM ⇒ 100

↑ 30% ⇒ 130

↓ 20% ⇒ 104

**Ans ⇒ (a) 4% increase**

(18) solution ⇒

100 ↑ 25% ⇒ 125

20% ↓ ⇒ 100

**Ans ⇒ (a) 0%**

(19) Soudution ⇒ 100 ↑ 40% ⇒ 140%

140 X 30 ↓ ⇒ 98

**Ans (d) 2% decrease**

(20) solution ⇒ Asalary 100 20% ↑ ⇒ 120

120 10 ↓ ⇒ 108

**Ans ⇒ (a) 8% increase**

(21) Ans ⇒ cost price ⇒ 100

selling price ⇒ 125

$$\Rightarrow \frac{125}{100} \times 100$$

**Ans ⇒ (b) 125%**

(22) marked price ⇒ 500x

w.r.t. disount ⇒ 450

$\frac{8}{100} \Rightarrow$

selling price ⇒ 450

profit ⇒ 8 w.r.t.

Profit ⇒ x

$$8 = \frac{x \times 100}{(450 - x)}$$

$$8(450 - x) = 100x$$

$$3600 - 8x = 100x$$

$$3600 = 108x$$

$$x = \frac{3600}{108}$$

$$x = \frac{400}{12}$$

$$x = \frac{100}{3}$$

$$x = 33.33$$

SII = 450 - 33.3

= 417.67

Ans (b) 420

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(23)

cost price ⇒ 100
profit 20%
⇒ 120

⇒ $\frac{24 \times 100}{120}$ ⇒ $\frac{100}{6}$

⇒ $\frac{50}{3}$ ⇒ 16.67

Ans ⇒ (a) 16.67%

(24)

cost price ⇒ 1200
sell ⇒ 960
discount ⇒ 240
⇒ $\frac{240}{1200} \times 100$

Ans ⇒ (b) 20%

(25)

$\frac{150}{500} \times 100$ ⇒ 30

Ans ⇒ (c) 30%

(26)

If B salary ⇒ 100
ethan A salary ⇒ 120

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

Ans ⇒ (a) 16.67%

(27) boys : girls = 3 : 2

$\Rightarrow \frac{3}{5} \times 100 = 20$

$\Rightarrow 60$

Ans $\Rightarrow$ b) 60%

(28)

$\frac{25}{50} = \frac{2 \times R \times 1}{100}$

Ans $\Rightarrow$ (b) 25%

(29)

suppose total vote $\Rightarrow x$

$\frac{x \times 65}{100} =$

$\frac{35x}{100} + \frac{65x}{100} = x$

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

$10,000$

$3000 = \frac{30}{100} x$

$x = 10,000$

Ans $\Rightarrow$ 10,000

(30) Rate 100 ↓ 30%

$100 - \frac{30}{100} \times 100$

$\Rightarrow 70$

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

Ans ⇒ (b) 42.85%

(31)

100 ↑ 50%

$\Rightarrow 150$

↓ 50%

$150 \times \frac{50}{100} \Rightarrow 75$

$\Rightarrow 75$

$\frac{25}{100} \times 100$

Ans ⇒ (b) 25% decrease

(32) $B = 10$

$A = 12$

$\Rightarrow \frac{2}{12} \times 100 \Rightarrow 16.67$

Ans $\Rightarrow$ (a) 16.67%.

(33) $x \times \frac{30}{100} = 90$

$\Rightarrow \frac{90 \times 100}{30_1} \Rightarrow 300$

$\Rightarrow \frac{300 \times 60}{100} \Rightarrow 180$

Ans $\Rightarrow$ (c) 180

(34) $\frac{25}{100} \times x = 5000$

$x = \frac{5000 \times 100}{25_1}$

$x = 20,000$

Ans $\Rightarrow$ (c) 20,000

(35) $xy = \left(x + \frac{x \times 20}{100}\right)(y - yi)$

$1 = \left(\frac{120}{100}\right)(1 - i)$

$100 = 120 - 120i$

$-20 = -120i$

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$i = \frac{1}{6} \times 100$

$i = 16.67\%$

**Ans ⇒ (a) 16.67%**

(36)

100 ↑ 20% ⇒ 120

↓ 10% 120 − 12 ⇒ 108

**Ans ⇒ (a) 8% increase**

(37)

cost price ⇒ 100

⇒ 25% ↑ ⇒ 125

discount ⇒ 20% ↓

⇒ $125 - 125 \times \frac{20}{100}$ ⇒ 100

⇒ 0%

**Ans ⇒ (a) 0%**

(38)

cost price ⇒ 500

loss ⇒ 20% ↓

$20 = \frac{\text{loss} \times 100}{500}$

$\frac{20 \times 500}{100} = \text{loss}$

⇒ 100 = loss

**Ans ⇒ (c) 400**

(39)

100 ↑ 10·1· ⇒ 110

10% ↓ 99

Ans ⇒ (b) 1% decrease

(40)

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

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

$x = 550$

Ans ⇒ (b) 550

(41)

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

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

$x = 45,000$

Ans ⇒ (b) 45000

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(42)

100 ↑ 30% ⇒ 130

130 ↓ 30%

$\Rightarrow \frac{13\cancel{0} \times 3\cancel{0}}{1\cancel{0}\cancel{0}} \Rightarrow 39$

$\Rightarrow$ 91

**Ans ⇒ (b) 9% decrease**

(43)

$10{,}000\left(1+\frac{10}{100}\right)^3$

$10000 \times (1.1)^3$

$10 \times \frac{1,331}{1000}$

$10 \times \cancel{1000} \times \frac{1331}{\cancel{1000}} \Rightarrow 13{,}310$

**Ans ⇒ (a) 13, 310**

(44)

$15\% A = 20 \times B$

$\frac{A}{B} = \frac{20}{15} \Rightarrow \frac{4}{3}$

**Ans ⇒ (b) 4 : 3**

(45)

$\frac{25}{100} = \frac{x \times 100}{800}$

800 + 200

$\frac{25}{\cancel{100}} \times \frac{800}{\cancel{100}} \Rightarrow$ 200 = x

Ans (b) 1000

(46) $\frac{50}{200} \times 100 \Rightarrow 25\%$.

Ans ⇒ (b) 25%

(47)

Solution ⇒

$$20 = \frac{x \times 100}{(720 - x)}$$

$$(20)(720 - x) = x \times 100$$
$$(20)(720) - 20x = x \times 100$$
$$(20)(720)\,6 = 120x$$
$$120 = x$$

$$720 - 120$$

cost ⇒ 600

Ans ⇒ (a) ₹ 600

(48)

$$15 = \frac{x \times 100}{500}$$

$$x = 75$$

Ans ⇒ (b) 425

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(49)

$$10 = \frac{x \times 100}{1500}$$

$$\frac{10 \times 1500}{100} \Rightarrow x$$

$$\boxed{x = 150}$$

$$\boxed{\text{Ans} \Rightarrow (c)\ 150}$$

(50)

cost price $\Rightarrow$ 100

$\uparrow$ 30% $\Rightarrow$ 130

$\downarrow$ 10% $\Rightarrow$ 117

$$\boxed{\text{gain} \Rightarrow 17\%}$$

$$\boxed{\text{Ans} \Rightarrow (a)\ 17\%}$$