Aptitude Assignment No-01

1) What is 25% of 200? → $\frac{25}{100} \times 200 = 50$.

2) 40% of a no ie x is 80. x = ?

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

$$x = \frac{80}{\frac{4}{10}} = \frac{80}{0.4} = 200$$

3) 75% of num is 150.

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

$$\therefore x = \frac{150}{\frac{75}{100}} \quad \therefore x = 200$$

4) 15% of 120

$$\frac{15}{100} \times 120 = 18$$

5) 30% of a num is 90, then num?

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

$$\therefore x = \frac{90}{0.3}$$

$$\therefore x = 300$$

6) price of product ↑ from ₹200 to ₹250.
What is % ↑?

→

$$I = 250 - 200 = 50.$$

$$I = \frac{50}{200} = 0.25.$$

$$P = 0.25 \times 100 = 25\%$$

Name :
Date : / /

7) Salary ↑ From ₹40,000 to ₹50,000.

$I = 50,000 - 40,000 = 10000$

$I = \frac{10000}{40000} = \frac{1}{4} = 0.25$

$P = 0.25 \times 100 = 25\%$

8) old population = 10,000 , New = 8,000

decrease = old − New = 10,000 − 8,000 = 2,000

% decrease = (Decrease / original) × 100

= (2,000 / 10,000) × 100 = 20%

9) Price drop = old − New = ₹500 − ₹400 = 100

$d = \frac{100}{50}$

$= 1/5 = 0.2$

$P = 0.2 \times 100$

$= 20\%$

10) CP = ₹600 , SP = 2450.

Loss = CP − SP = 2600 − 2450 = 150.

~~% Loss = (Loss / CP) × 100~~

~~= (150 / 2600) × 100.~~

~~= 5.77 %~~

% Loss = (150 / 600) × 100

= 25%.

Section 3: Percentage Comparison

Name:
Date: / /

11) 30% of 400

$= \left(\frac{30}{100}\right) \times 400$

$= 120$

40% of 300

$= \frac{40}{100} \times 300$

$= 0.40 \times 300$

$= 120.$

→ Both are equal.

12) Saving percentage = 100% - 60%.

= 40%.

40% of 8,000.

$\frac{40}{100} \times x = 8,000$

$0.4 \times x = 8,000$

$x = \frac{8000}{0.4}$

$x = 20,000$

13) A is 20% more than B

Let B = 100 A = 120

D = 120 - 100 = 20.

$\% = \left(\frac{20}{120}\right) \times 100 = 16.67\%.$

14) Percentage reduce $= \left(\frac{25}{100+25}\right) \times 100 = 20\%.$

15) $\left(\frac{40}{100+40}\right) \times 100 = \left(\frac{40}{140}\right) \times 100 = 28.57\%.$

16) original = 100.

↑ by 20%. $= 100 + \left(\frac{20}{100}\right) \times 100 = 120.$

↑ by 10% = $120 + \left(\frac{10}{100}\right) \times 120 = 108$

Net percent change = 108 − 100 = 8

17) Let N = 100

↑ 30% = $100 + \left(\frac{30}{100}\right) \times 100$

= 130.

↑ 20% = $130 - \left(\frac{20}{100}\right) \times 130$

= 104

Net change = 104 − 100 = 4% ↑.

18) ↑ by 25% = $100 + \left(\frac{25}{100}\right) \times 100 = 125$

↑ 20% = $125 - \left(\frac{20}{100}\right) \times 125 = 100$.

Net change = 100 − 100 = 0%.

19) ↑ 40% = $100 + \left(\frac{40}{100}\right) \times 100 = 140$.

↑ by 30% = $140 - \left(\frac{30}{100}\right) \times 140 = 98$

Net change = 98 − 100 = 2% ↓.

20) S = 100.

Increase 20% = $100 + \left(\frac{20}{100}\right) \times 100 = 120$.

↑ by 10% = ~~100~~ $120 - \left(\frac{10}{100}\right) \times 100 = 108$.

Net % change = 108 − 100

= 8% ↑.

21) CP = 100%. SP = 100% + 25% = 125%.

Profit = 25%.

SP = 125%.

22) Selling price = Marked price - Discount price

discount (d) = 10% of 500

$= \left(\frac{10}{100}\right) \times 500 = 50.$

$\therefore SP = 500 - 50 = 450.$

$CP = 450 = x + \left(\frac{8}{100}\right) \times x$

$450 = x(1 + 0.08)$

$450 = 1.08x$

$x = \frac{450}{1.08}$

$\boxed{x = 420}$.

23) Let CP = be 100.

Profit = 20% of 100 = 20.

SP = CP + Profit = 100 + 20 = 120.

$PP = \left(\frac{20}{120}\right) \times 100 = 16.67.$

24) Discount = 1200 - 960 = 240

% Discount $= \left(\frac{240}{1200}\right) \times 100$

$= 20\%$

25) Profit = 650 − 500 = 150.

% Profit = $\left(\frac{150}{500}\right) \times 100 = 30\%$.

26) Let B = 100 A = 120

$\therefore$ = 120 − 100 = 20

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

27) 3 : 2 = total 5 parts

$\therefore$ % boys = $\left(\frac{3}{5}\right) \times 100 = 60\%$

28)

Increase population = 2,50,000 − 2,00,000

= 50,000.

% ↑ = $\left(\frac{50,000}{2,50,000}\right) \times 100$

= 25%.

29) Candidate A = 65% B = 35%

Diff = 65 − 35 = 30%

Vote 30 % = 3000

Total votes = $\frac{3000}{0.30} = 90000$

30) % ↑ = $\frac{30}{100-30} \times 100$

= $\frac{30}{70} \times 100$

= 42.85 %.

31) Let N = 100

↑ no is 50 % of 100 = 150

↓ by 50 % = $150 - \frac{50}{100} = 75$

Net change = 75 − 100 = 25 % decrease

32) A is 20 % taller than B.

120 − 100 = 20.

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

33) If 30 % is 90. ∴ 60 % = 30 × 6

10 % = $\frac{90}{3}$ = 180.

= 30.

34) Spend 75 % = 100 % − 75 % = 25 %.

25 % of income = 5000

Total = $\frac{50,000}{(25/100)}$ = 50000 × 4 = 20,000

35) 20 % ↑

Let 120 − 100 = 20 %.

Consumption value = $\frac{20}{120} \times 100$

= 16.67.

36) 8 % increase

37) CP = 100.
MP = 100 + 25 = 125.
Discount % = $\left(\frac{20}{100}\right) \times 125$
SP = 125 - 25 = 100.
Profit = 100 - 100 = 0%.

38) CP = 500 Loss = 20%.
Loss = $\frac{20}{100} \times 500 = 100$.
$\therefore$ SP = 500 - 100 = 400

39) Let sal 100
↑ by 10% = 100 + 10 = 110
↓ by 10% = 99
Net change = 1
1% change

40) Passing No 40%.
passing marks = 200 + 20 = 220.
40% of total marks = 220.
$\frac{220}{(40/100)} = 220 \times \left(\frac{100}{40}\right) = 550$

41) Total per = 20 + 30 + 10 = 60%.
Saving % = 100 - 60 = 40.
40% of salary = 18,000
Total Sal = $\frac{18000}{\left(\frac{40}{100}\right)} = 45,000$

Name :
Date : / /

42) Let cost be 100
↑ by 30% = 130
↓ by 30 = 91
Net change = 9%

43) 1st yr = 10,000 × 1.10
= 11,000
2nd yr = 11000 × 1.10 = 12100
3rd yr = 12100 × 1.10 = 13310

44) 15% of A = 20% of B.
0.15A = 0.20B
$\frac{A}{B} = \frac{0.20}{0.15} = \frac{20}{15} = 4/3$ ∴ A : B = 4 : 3.

45) Profit = $\left(\frac{25}{100}\right) \times 800 = 200$.
SP = 800 + 200 = 1000

46) Profit = 250 − 200 = 50.
Profit % = $\left(\frac{50}{200}\right) \times 100$
= 25%.

47) Cost Price = x
1.20 x = 720.
∴ $x = \frac{720}{1.20}$ ∴ x = 600

48) Loss = $\frac{15}{100} \times 500 = 75$.
SP = 500 − 75 = 425

49) Loss = $\left(\frac{10}{100}\right) \times 1500 = 150$
∴ SP = 1500 − 150
= 1350.

50) 17% is the gain