

Quant Mega Quiz for SSC Tier - 1 (Solutions)

S1. Ans.(b)

Sol.

Depreciation Rate 1st year $\Rightarrow 10\% \Rightarrow \frac{1}{10}$

Depreciation Rate 2nd year $\Rightarrow 5\% \Rightarrow \frac{1}{20}$

	Original	Final
1 st year	10	9
2 nd year	20	19
3 rd year	10	9
4 th year	20	19

40000 : 29241

29241r \rightarrow 146205 Rs.

1r \rightarrow 5 Rs.

40000r \rightarrow 200000

S2. Ans.(d)

Sol.

Let he correct x% in the last 40 questions.

Using Alligation

40 Question	40 Question
65%	x%
75%	
x - 75	10

$$\frac{x - 75}{10} = \frac{40}{40}$$

$$x - 75 = 10$$

$$x = 85\%$$

S3. Ans.(a)

Sol.

30% \rightarrow - 40

42% \rightarrow + 32

12% \rightarrow 72

1% \rightarrow 6

Maximum marks

= 100%

= $100 \times 6 = 600$

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Bilingual (with eBooks)

12 Months Validity

S4. Ans.(d)**Sol.**

ATQ,
 $[100 - (65 + 20)]r \rightarrow 1305 \text{ Rs.}$
 $15r \rightarrow 1305$
 $1r \rightarrow 87$
 $100r \rightarrow 8700$
 Total Investment $\rightarrow 8700$

S5. Ans.(c)**Sol.**

$\frac{5A}{100} = \frac{15B}{100}$
 $A : B \Rightarrow 3 : 1$
 $\frac{10B}{100} = \frac{20C}{100}$
 $B : C = 2 : 1$
 $A : B : C = 6 : 2 : 1$
 $1r \rightarrow 2000$
 $9r \rightarrow 18000 \text{ Rs.}$

S6. Ans.(b)**Sol.**

1st Wife $\rightarrow \frac{1}{2}$
 Remaining $\rightarrow \frac{1}{2}$
 2nd Wife $\rightarrow \frac{1}{4}$
 Remaining $\rightarrow \frac{1}{2} - \frac{1}{4} = \frac{1}{4}$
 3rd wife $\rightarrow \frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$
 Remaining $\rightarrow \frac{1}{4} - \frac{1}{8} = \frac{1}{8}$
 $\left(\frac{1}{2} + \frac{1}{4} + \frac{1}{8}\right)r \rightarrow 130900 \text{ kg}$
 $\left(\frac{4 + 2 + 1}{8}\right)r \rightarrow 130900 \text{ kg}$
 $\frac{7r}{8} \rightarrow 130900 \text{ kg}$
 $1r \rightarrow 130900 \times \frac{8}{7}$
 $\Rightarrow 18700 \times 8$
 $\Rightarrow 149600 \text{ kg}$

**S7. Ans.(b)****Sol.**

Product A $\rightarrow 20$
 Product B $\rightarrow 60$
 Remaining $\rightarrow 20$
 ATQ,
 $(60\% - 20\%) \rightarrow 720$
 $40\% \rightarrow 720$
 $100\% = 1800$

S8. Ans.(b)**Sol.**

Total → 20000

Total turnout → 16000

Total valid ⇒ $16000 \times \frac{84}{100} \Rightarrow 13440$ Losing candidate got ⇒ $20000 \times \frac{20}{100} \Rightarrow 4000$ Winner got ⇒ $13440 - 4000 = 9440$ $\% \Rightarrow \frac{9440}{20000} \times 100$

⇒ 47.2%

S9. Ans.(d)**Sol.**

Total Marks = 250

Overall Marks ⇒ $250 \times \frac{78}{100} = 195$ Marks scored in English & History together = $\frac{65}{100} \times 100 + \frac{85}{100} \times 100 = 65 + 82 = 147$ Marks in Sociology = $195 - 147 = 48$ $\% = \frac{48}{50} \times 100 = 96\%$ **S10. Ans.(b)****Sol.**

Let total employees → 100

Female employees → 30

Male employees → 70

Females earning greater than 8000 Rs. = $\frac{30 \times 30}{100} = 9$ Men earning more than 8000 Rs. = $70 \times \frac{20}{100} = 14$ Required % = $\frac{14+9}{100} \times 100 = 23\%$ **S11. Ans.(c)****Sol.**

Let C.P = 100

S.P at 8% gain = 108

S.P at 8% loss = 92

 $(108 - 92)r = 28$ $16r \rightarrow 28$ $1r \rightarrow \frac{28}{16} \Rightarrow \frac{7}{4}$ $100r \rightarrow \frac{7}{4} \times 100$

= 175 Rs.



S12. Ans.(c)

Sol.

$$\begin{aligned} \text{C.P of 500 m} &= 500 \times 50 \text{ paise} \\ &= 250 \text{ Rs.} \end{aligned}$$

$$\text{C.P of 250 m} = 125$$

$$\text{S.P of 250 m at 5\% profit} = 125 \times \frac{105}{100} = 131.25$$

$$\text{S.P at 10\% net profit} = 250 \times \frac{110}{100} = 275$$

$$\text{Remaining S.P} = 275 - 131.25 = 143.75$$

$$\text{C.P of Remaining 50\%} = 125$$

$$\text{S.P of Remaining 50\%} = 143.75$$

$$\text{Profit\% on remaining} = \frac{18.75}{125} \times 100 = 15\%$$



BILINGUAL

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COMPLETE FOUNDATION
2020-21 Batch 2.0

Starts Dec 28, 2020

11 AM to 05 PM

S13. Ans.(b)

Sol.

Let C.P of Book $\rightarrow 100$

C.P of Book for seller

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

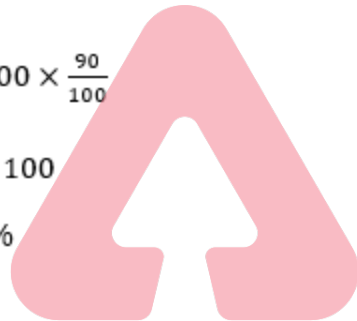
$$= 70 \text{ Rs.}$$

$$\text{S.P of Book} = 100 \times \frac{90}{100}$$

$$= 90 \text{ Rs.}$$

$$\text{Profit \%} = \frac{20}{70} \times 100$$

$$= \frac{200}{7} = 28\frac{4}{7}\%$$



S14. Ans.(a)

Sol.

Let C.P $\rightarrow 100$

M.P $\rightarrow 112$

$$\text{S.P} = 112 \times \frac{95}{100}$$

$$= 106.4 \text{ Rs.}$$

$$106.4r \rightarrow 532$$

$$1r \rightarrow 5$$

$$100 \rightarrow 500 \text{ Rs.}$$

S15. Ans.(d)

Sol.

Let C.P $\rightarrow 100$

M.P = 140

$$\text{S.P} = 140 \times \frac{75}{100}$$

$$= 105$$

$$105r \rightarrow 2100$$

$$100r \rightarrow \frac{2100}{105} \times 100$$

$$= 2000 \text{ Rs.}$$

S16. Ans.(c)

Sol.

Let C.P = 100

S.P = 80

$$\frac{C.P}{S.P} = \frac{100}{80}$$

$$C.P = 5/4 S.P$$

S17. Ans.(b)

Sol.

-30% loss + 40% profit

70% → 140

1% → 2 Rs.

100% → 200 Rs.

S18. Ans.(b)

Sol.

$$\text{Price 510 eggs} = 510 \times \frac{20}{12}$$
$$= 850 \text{ Rs.}$$

$$S.P = \frac{850 \times 120}{100}$$

$$= 1020$$

$$S.P \text{ of } (510 - 30) \text{ eggs} = 1020$$

$$S.P \text{ of } 480 \text{ eggs} = 1020$$

$$S.P \text{ per dozen} = \frac{1020}{40}$$

$$= 25.5 \text{ Rs.}$$

S19. Ans.(a)

Sol.

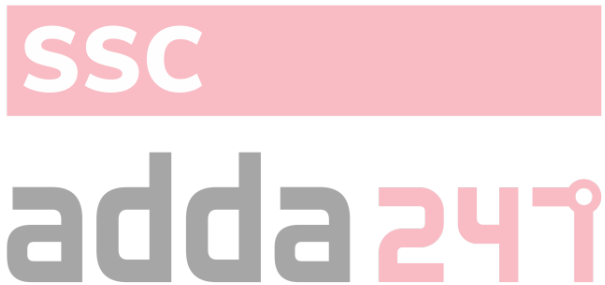
C.P of A → 100

A	B	C
100	88	99

A sells to B at 99

$$\text{Loss \%} = \frac{1}{100} \times 100$$

$$= 1\%$$



S20. Ans.(b)

Sol.

$$\text{Overall profit} = \frac{30}{900} \times 100$$

$$= \frac{10}{3}\%$$

$$15\% \quad -10$$

$$\frac{10}{3}$$

$$\frac{40}{3} \quad : \quad \frac{35}{3}$$

$$8 \quad : \quad 7$$

$$\text{C.P of one type-I cake} = \frac{8}{15} \times \frac{900}{3} = \frac{480}{3} = 160$$

$$\text{C.P of one type-II cake} = \frac{7}{15} \times \frac{900}{6} = 70 \text{ Rs.}$$

S21. Ans.(c)

Sol.

Let C.P of 1 camera → 100

C.P of 20 cameras = 2000

S.P of 20 cameras

$$= 1200 \times \frac{120}{100} + 800 \times \frac{110}{100}$$

$$= 1440 + 880$$

$$= 2320$$

$$\text{Profit} = 2320 - 2000 = 320$$

S.P of 20 cameras at profit 15%

$$= 2000 \times \frac{115}{100}$$

$$= 2300$$

$$\text{Profit} = 2300 - 2000$$

$$= 300$$

$$\text{Reduction in Profit} = 320 - 300 = 20$$

$$20r \rightarrow 36$$

$$1r \rightarrow 1.8$$

$$100r \rightarrow 1.8 \times 100$$

$$= 180$$

$$\text{C.P of 1 camera} = 180$$

S22. Ans.(c)

Sol.

Original M.P = 400 Rs.

M.P is 33.33% greater than C.P

$$33.33\% = \frac{1}{3} \rightarrow \text{Increase}$$

$$\rightarrow \text{C.P}$$

$$\text{M.P} \Rightarrow (3 + 1)r \Rightarrow 400 \text{ Rs.}$$

$$4r \Rightarrow 400$$

$$1r \Rightarrow 100$$

$$3r \Rightarrow 300$$

$$\text{C.P} = 300 \text{ Rs.}$$



TEST SERIES

BILINGUAL



SSC CGL 2020-21

PRIME

500+ TOTAL TESTS

Let S.P be x

$$\text{Profit} = x - 300$$

$$\text{Increased M.P} = 400 \times \frac{125}{100} = 500 \text{ Rs.}$$

$$16.66\% \Rightarrow \frac{1}{6} \rightarrow \text{Increase}$$

$$6 \rightarrow \text{S.P}$$

$$6r \rightarrow x$$

$$(6 + 1)r \rightarrow \frac{x}{6} \times 7$$

$$\text{Increased S.P} = \frac{7}{6}x$$

$$\text{Profit} = \frac{7}{6}x - 300$$

ATQ,

$$\frac{7}{6}x - 300 = 2(x - 300)$$

$$\frac{7}{6}x - 2x = -600 + 300$$

$$x = 360$$

$$\text{Increased S.P} = \frac{7}{6} \times 360$$

$$= 420 \text{ Rs.}$$

S23. Ans.(c)

Sol.

$$\text{C.P of A} = \text{Rs. } 160$$

$$\text{Let S.P of A} = x$$

$$\text{S.P of B} = \text{Rs. } 240$$

$$\text{Let C.P of B} = y$$

If S.P of A = C.P of B, Then profit is 20% on selling A

$$\therefore 160 \times \frac{120}{100} = y$$

$$y = 192$$

$$\text{Profit of B} = 240 - 192$$

$$= 48$$

$$\text{Profit \%} = \frac{48}{192} \times 100$$

$$= 25\%$$

S24. Ans.(c)

Sol.

Let S.P of cold drinks of both companies be x

$$\text{M.P of Pepsi} = x \times \frac{100}{90} \times \frac{100}{75}$$

$$\text{M.P of Coke} = x \times \frac{100}{85} \times \frac{100}{80}$$

Ratio \Rightarrow

$$x \times \frac{100}{90} \times \frac{100}{75} : x \times \frac{100}{85} \times \frac{100}{80}$$

$$85 \times 80 : 90 \times 75$$

$$136 : 135$$

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S25. Ans.(b)**Sol.**

Let C.P = 100

Tag price = 80

S.P after discount

$$= 80 \times \frac{93.75}{100}$$

= 75 Rs.

Loss = 100 - 75 = 25 Rs.

25 Rs. are less at C.P of Rs. 100

1 Rs. less at C.P of = $\frac{100}{25}$ 37.5 Rs. less at C.P of = $\frac{100}{25} \times 37.5 = \text{Rs. } 150$

S.P = 150 - 37.5 = Rs. 112.5

S26. Ans.(c)**Sol.**

C.P	S.P
100	95
100	103.33

Profit 3.33%

$$(103.33 - 95)r \rightarrow 65$$

$$8.33r \rightarrow 65$$

$$1r \rightarrow \frac{65}{8.33} \cong 7.80$$

$$100r \rightarrow 780$$

CP = Rs. 780

S.P = 936

$$\text{Profit \%} = \frac{156}{780} \times 100$$

$$= 20\%$$

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S27. Ans.(a)**Sol.**

Let C.P of watch = x

Profit % = x%

$$x \times \frac{(100 + x)}{100} = 96$$

$$x^2 + 100x = 9600$$

$$x^2 + 100x - 9600 = 0$$

$$x^2 + 160x - 60x - 9600 = 0$$

$$x(x + 160) - 60(x + 160) = 0$$

$$x = 60$$

$$\text{New S.P} = 60 \times \frac{220}{100}$$

$$= 132$$

S28. Ans.(b)

Sol.

Let C.P of 1000 gm → Rs. 1000

C.P of 1100 gm → Rs. 1000

C.P of 1000 gm for shopkeeper → $\frac{10000}{11}$

S.P of 900 gm → Rs. 1000

S.P of 1000 gm → $\frac{10000}{9}$

$$\text{Profit} = \frac{10000}{9} - \frac{10000}{11}$$

$$= \frac{20000}{99}$$

$$\text{Profit \%} = \frac{\frac{20000}{99}}{\frac{10000}{11}} \times 100$$

$$= \frac{200}{9} = 22\frac{2}{9}\%$$

S29. Ans.(b)

Sol.

$$\text{Profit \%} = 14\frac{2}{7}\%$$

$$= \frac{1}{7} \rightarrow \text{Profit}$$

$$\text{C.P} = 7 - 1 = 6$$

$$7r \rightarrow 280$$

$$1r \rightarrow 40$$

$$6r \rightarrow 240$$

$$\text{C.P} \Rightarrow 240$$

$$\text{S.P} \Rightarrow 280$$

$$\text{Actual Profit} = \frac{40}{240} \times 100$$

$$= \frac{50}{3} = 16.66\%$$



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S30. Ans.(a)

Sol.

$$P\% = M\% - D\% - \frac{MD}{100}$$
$$32 = M - 12 - \frac{12M}{100}$$

$$44 = \frac{22}{25}M$$

$$M = 50\%$$

$$P = 50 - 20 - \frac{20 \times 50}{100}$$

$$= 50 - 20 - 10$$

$$= 20\%$$

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Useful for CGL, CHSL & others

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12 Months Validity*