

## Quant Mega Quiz for SSC CGL Tier - 2 (Solutions)

**S1. Ans.(a)**

**Sol.**

Let total employee in ADDA247 = 100

	Men	Women
More than 35 k	30	70
	18	70 - 18 = 52 (70% of total employee)
Less than 35 k	12	18

Required fraction =  $\frac{18}{70} = \frac{9}{35}$

**S2. Ans.(c)**

**Sol.** Can't determine because we don't have relation between jump and run.

**S3. Ans.(c)**

**Sol.**

Rise in salary =  $168.51 - 100$   
= 68.51

The best way to Approach these types of questions is by option

Let option A (17)

$$\begin{aligned} \text{Successive rise} &= 17 + 17 + \frac{289}{100} \\ &= \frac{36.89 + 17}{80} + \frac{36.89 \times 17}{100} \\ &= 53.89 + \frac{36.89 \times 17}{100} \times \text{Not possible} \end{aligned}$$

So we can eliminate option D (12)

Next take option C (19)

$$\begin{aligned} \Rightarrow 19 + 19 + \frac{19 \times 19}{100} &= 41.61 \\ \Rightarrow 41.61 + 19 + \frac{19 \times 41.61}{100} &= 60.61 + 7.9059 \\ &= 68.4159 \end{aligned}$$

**S4. Ans.(d)**

**Sol.**

Let Ankit's Income = 100

Saving = 9

Expenses = 91

New Income = 119

New Expenses = 110

$$\text{Increase in Expenses} = \frac{110 - 91}{91} \times 100 = 20.87\%$$

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S5. Ans.(c)

Sol.

ATQ,

A	B	C	D
170	: 100	: $170 \times \frac{29}{8.5}$	: $170 \times \frac{29}{8.5} \times \frac{130}{100}$
170	: 100	: 580	: 754
	↓		↓

After 29% increase  $\Rightarrow$  129  $754 \times \frac{129}{100}$

Required percent =  $\frac{754 \times 129 \times 100}{129 \times 100} = 754\%$

S6. Ans.(c)

Sol.

Let the third number (z) is 100

than  $x = 85, y = 77$

Required percentage =  $\frac{85 - 77}{85} \times 100$

$\frac{8}{17} \times 100 = \frac{160}{17} = 9.41\%$



S7. Ans.(b)

Sol.

Successive discount =  $35 + 35 - \frac{35 \times 35}{100}$

=  $70 - 12.25$

=  $57.75\%$

Successive discount =  $57.75\% + 35\% - \frac{57.75 \times 35}{100}$

=  $92.75 - 20.21$

=  $72.54\%$

S8. Ans.(a)

Sol.

SP = 8117, MP = 9500, D = ?

M.P.  $\times \frac{(100 - D)}{100} = SP$

$\Rightarrow 9500 \times \left(\frac{100 - D}{100}\right) = 8,117$

$\Rightarrow 100 - D = 85.44$

$\Rightarrow D = 14.6\%$

S9. Ans.(d)

Sol.

Let cost price of an article is = 100

And articles are

$$A = 8$$

$$B = 10$$

$$C = 7$$

CP of Article A = 800

$$\text{Loss} = 800 \times \frac{50}{100} \times \frac{30}{100} = 120$$

Cost price of remaining article = 400

CP of article B = 1000

$$\text{Loss} = 1000 \times \frac{20}{100} \times \frac{40}{100} = 80$$

$$\text{Cost price of Remaining article} = 1000 \times \frac{6}{10} = 600$$

CP of article C = 700

Total profit he wants = 12% of all the article

$$= (800 + 1000 + 700) \times \frac{12}{100} = 300$$

$$\text{Required percentage} = \frac{(300+120+80)}{(400+600+700)} \times 100$$

$$= 29.5\%$$

S10. Ans.(c)

Sol.

Let Boys = 700

girls = 600

Scholarship - holders boys = 511

Scholarship - holders girls = 522

$$\text{Required \%} = \frac{1300-1033}{1300} \times 100 = 20.54\%$$

S11. Ans.(b)

Sol.

Original Price  $\Rightarrow$  100 Rs.

New Price  $\Rightarrow$  160 Rs.

New Price must be reduced by

$$= \frac{60}{160} \times 100$$

$$= \frac{150}{4}$$

$$= \frac{75}{2} = 37\frac{1}{2}\%$$



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**S12. Ans.(a)****Sol.**

$$\text{Profit of Mr. X} = 11\frac{1}{9}\%$$

$$= \frac{100\%}{9} = \frac{1}{9}$$

$$\text{S.P} = 9 + 1 = 10$$

10 ratio  $\rightarrow$  5000 Rs.9 ratio  $\rightarrow$  4500 Rs.C.P of Mr. X  $\rightarrow$  4500

$$5000 \frac{(100 - x)}{100} = 4500$$

$$100 - x = 90$$

$$x = 10\%$$

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

**S13. Ans.(c)****Sol.**Let Original value  $\Rightarrow$  Rs. 100

$$\text{New value} = 100 \times \frac{120}{100}$$

$$= 120$$

New value must be reduced by

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

$$= \frac{50}{3} = 16\frac{2}{3}\%$$

**S14. Ans.(b)****Sol.**

ATQ,

$$x \times \frac{88}{100} \times \frac{95}{100} = 8360$$

$$x = \text{Rs. } 10000$$

**S15. Ans.(a)****Sol.**

Marks scored out of 900

$$= 900 \times \frac{72}{100}$$

$$= 648$$

Marks scored out of 700

$$= 700 \times \frac{80}{100}$$

$$= 560$$

Total marks out of 1600 = 1208

$$\text{Combined \%} = \frac{1208}{1600} \times 100$$

$$= 75.5\%$$

**S16. Ans.(b)**

**Sol.**

Let total men  $\Rightarrow$  100

$$\text{Lost in ware} = 100 \times \frac{10}{100} = 10$$

$$\text{Remaining} = 100 - 10 = 90$$

Died due to disease

$$= 90 \times \frac{10}{100}$$

$$= 9$$

$$\text{Remaining} = 90 - 9$$

$$= 81$$

$$\text{Disabled} = 81 \times \frac{10}{100}$$

$$= 8.1$$

$$\text{Total lost} = 10 + 9 + 8.1$$

$$= 27.1$$

$$\text{Remaining} = 100 - 27.1$$

$$= 72.9$$

$$72.9r \rightarrow 729000$$

$$1r \rightarrow 10000$$

$$100r \rightarrow 1000000$$

$$\text{Original strength} = 1000000$$

**S17. Ans.(b)**

**Sol.**

$$\Rightarrow \frac{30 \text{ minutes}}{1 \text{ day}} \times 100$$

$$\Rightarrow \frac{30}{1 \times 24 \times 60 \text{ minutes}} \times \text{minutes} \times 100$$

$$= \frac{100}{48}$$

$$= 2.083$$

**S18. Ans.(c)**

**Sol.**

ATQ,

$$x \times \frac{125}{100} \times \frac{96}{100} \times \frac{125}{100} \times \frac{96}{100} \times \frac{125}{100} = 72000$$

$$x = \text{Rs. } 40,000$$

**S19. Ans.(c)**

**Sol.**

$$\text{Total passed} = 73 + 70 - 64$$

$$= 79\%$$

$$\text{Failed \%} = (100 - 79)\%$$

$$= 21\%$$

$$21\% \rightarrow 6300$$

$$100\% = 3000$$



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**S20. Ans.(b)**

**Sol.**

income = 100

Expenditure = 75

Savings = 25

$$\text{Increased Income} = 100 \times \frac{120}{100} = 120$$

$$\begin{aligned} \text{Increased Expenditure} &= 75 \times \frac{110}{100} \\ &= 82.5 \end{aligned}$$

$$\text{New Saving} = 120 - 82.5$$

$$= 37.5$$

$$\text{Increase in Saving} = 37.5 - 25$$

$$= 12.5$$

$$\% \text{ Increase} = \frac{12.5}{25} \times 100 = 50\%$$

**S21. Ans.(b)**

**Sol.**

Sonu → 20 days

75% work done

By Abhijeet → 10 days

$\frac{3}{4}$  work → 10 days

1 work →  $\frac{40}{3}$  days

Complete work will be done by both in

$$\Rightarrow \frac{3}{40} + \frac{1}{20}$$

$$\Rightarrow \frac{3 + 2}{40}$$

$$\Rightarrow \frac{5}{40}$$

$$\Rightarrow \frac{1}{8}$$

$$\Rightarrow 8 \text{ days}$$



**S22. Ans.(b)**

**Sol.**

		Asha		Usha
Efficiency	→	125	:	100
		5	:	4

$$\text{Time} \left( \propto \frac{1}{\text{Efficiency}} \right) \rightarrow 4 : 5$$

$$5r \rightarrow 25 \text{ days}$$

$$4r \rightarrow 20 \text{ days}$$

Total Work

Usha	25	4
	100	
Asha	20	8

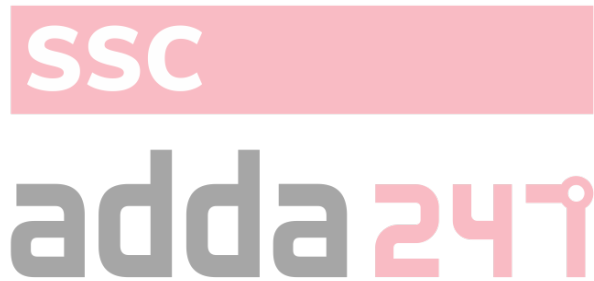
5 days work of Usha + Asha  
 $= 5 \times 9 = 45$   
 Remaining work  $= 100 - 45$   
 $= 55$   
 Asha worked  
 Alone for  $= \frac{55}{5}$   
 $= 11$  days

**S23. Ans.(c)**

**Sol.**

Kareena	9	2	
Karishma	18	18	1
Shahid	3	6	

3 days work of Kareena & Karishma  
 $= 3 \times 3 = 9$   
 Remaining work  $= 18 - 9 = 9$   
 9 work will be done by all three in  
 $= \frac{9}{9} = 1$  day  
 Work lasted for  $\Rightarrow 3 + 1 = 4$  days



**S24. Ans.(c)**

**Sol.**

	Total Work	Efficiency	
K	20	3	
B	60	60	1
S	30	2	

5 days work of all 3  $= 5 \times 6$   
 $= 30$   
 Remaining work  $= 60 - 30$   
 $= 30$   
 3 days work of  
 $K + B = 4 \times 3$   
 $= 12$   
 Remaining work  $= 30 - 12$   
 $= 18$   
 Kavita will complete the remaining work in  
 $= \frac{18}{3} = 6$

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**S25. Ans.(a)**

**Sol.**

	Total Work	Efficiency
Chandni	9	4
	36	
Divakar	12	3

2 days work of C + D = 7

10 days work of C + D = 35

Remaining work = 36 - 35

= 1

Now, its Chandni's turn Chandni will complete 1 work in =  $\frac{1}{4}$  days

Total time =  $10\frac{1}{4}$

**S26. Ans.(d)**

**Sol.**

A 6 6

B 12 36 3

C 18 2

3 days work of A, B, C  $\Rightarrow$  11

9 days work of A + B + C  $\Rightarrow$  33

Remaining work = 36 - 33

= 3

Now, it's a's turn, A will complete 3 work in

$\Rightarrow \frac{3}{6} = \frac{1}{2}$  days

Total time =  $9\frac{1}{2}$  days

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**S27. Ans.(c)**

**Sol.**

Let C takes x days

A + B  $\rightarrow$  x

A  $\rightarrow$  x + 2

B  $\rightarrow \frac{1}{x} - \frac{1}{x+2}$

$\Rightarrow \frac{x+2-x}{x(x+2)}$

B  $\Rightarrow \frac{x(x+2)}{2}$  days

A  $\Rightarrow$  B - 6

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

$2x+4 = x^2+2x-12$

$x^2 = 16$

$x = 4$

B does the whole work in

$= \frac{4 \times 6}{2} = 12$



**S28. Ans.(d)**

**Sol.**

$$A + B \rightarrow 6 \text{ days}$$

$$B + C \rightarrow 10 \text{ days}$$

Let A takes  $x$  days

$$C = 2x$$

$$\frac{1}{x} + \frac{1}{B} = \frac{1}{6}$$

$$\frac{1}{B} = \frac{x-6}{6x}$$

$$B = \frac{6x}{x-6}$$

$$\frac{x-6}{6x} + \frac{1}{2x} = \frac{1}{10}$$

$$\frac{x-6+3}{6x} = \frac{1}{10}$$

$$10x - 30 = 6x$$

$$4x = 30$$

$$x = 15/2$$

$$x = 7.5 \text{ days}$$

A takes = 7.5 days

**S29. Ans.(b)**

**Sol.**

Sharma : Kelkar

$$\text{Efficiency} \rightarrow 80 : 100$$

$$= 4 : 5$$

$$\text{Time} \rightarrow 5 : 4$$

$$4r \rightarrow 24$$

$$1r \rightarrow 6$$

$$5r \rightarrow 30$$

Sharma will complete the whole work in 30 days

**S30. Ans.(b)**

**Sol.**

$$12 \times 20 = 8 \times x$$

$$x = 30 \text{ days}$$

$$\text{More days required} \Rightarrow 30 - 20$$

$$\Rightarrow 10 \text{ days}$$



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