

## Quant Mega Quiz for SSC CHSL (Solutions)

S1. Ans.(b)

Sol.

$$\text{Sum of ages of family} = 6 \times 33 = 198$$

$$\text{Sum of ages of family without youngest member} = 198 - 8 = 190$$

$$\text{Sum of ages of family just before the birth of youngest member}$$

$$= 190 - 5 \times 8$$

$$= 190 - 40 = 150$$

$$\text{Average} = 150/5 = 30 \text{ years}$$

S2. Ans.(a)

Sol.

$$\text{Ratio} = \frac{1}{2} : \frac{2}{3} : \frac{3}{4}$$

$$= 6 : 8 : 9$$

$$\text{Last boy gets} = 529 \times \frac{9}{23}$$

$$= 23 \times 9 = 207$$

S3. Ans.(c)

Sol.

$$\begin{aligned} \text{Sonu : Ravi} &\rightarrow 1 : 2 \\ \text{Ravi : Gaurav} &\rightarrow 3 : 4 \end{aligned}$$

$$\begin{aligned} \text{Sonu : Ravi : Gaurav} &\rightarrow 3 : 6 : 8 \times 5 \\ \text{Gaurav : Prem} &\rightarrow 5 : 6 \times 8 \end{aligned}$$

$$\text{Sonu : Ravi : Gaurav} \rightarrow 15 : 30 : 40$$

$$\text{Gaurav : Prem} \rightarrow 40 : 48$$

$$\text{Sonu : Ravi : Gaurav : Prem}$$

$$= 15 : 30 : 40 : 48$$

$$15r \rightarrow 30 \text{ years}$$

$$1r \rightarrow 2 \text{ years}$$

$$48r \rightarrow 96 \text{ years}$$

$$\text{Age of Prem} = 96 \text{ years}$$

6 Months Subscription

**SSC CGL**  
**TIER-II MAHA PACK**

Test Series, Live Classes,  
Video Course, Ebooks

**Bilingual** (With e-Books)

**S4. Ans.(a)**

**Sol.**

Old area = lb

New area =  $1.2 l \times 1.25 b$

= 1.5 lb

% Increase in area

$$= \frac{1.5 lb - lb}{lb} \times 100$$

$$= \frac{0.5 lb}{lb} \times 100$$

= 50%

**S5. Ans.(c)**

**Sol.**

Let price of each hindi magazine  $\rightarrow x$

Price of each English magazine =  $\frac{112}{100}x$

= 1.12x

2 Hindi + 3 English = 268

$$2x + 3.36x = 268$$

$$5.36x = 268$$

$$x = \frac{268}{5.36}$$

x = 50

Cost of English Magazine

=  $1.12 \times 50$

= 56 Rs.

**S6. Ans.(b)**

**Sol.**

Price to gain 25%

$$= 238 \times \frac{100}{85} \times \frac{125}{100}$$

= 350 Rs.

**S7. Ans.(b)**

**Sol.**

	Old	New
Price: Ratio $\rightarrow$	100	125
	4	5

Consumption ( $\propto \frac{1}{\text{price}}$ )  $\Rightarrow 5 : 4$

1r  $\rightarrow$  20 liters

5r  $\rightarrow$  100 liters

Initial Price of Petrol =  $\frac{5000}{100}$

= 50 Rs.

S8. Ans.(d)

Sol.

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

$$20\% = M - 10 - \frac{M}{10}$$

$$30 = \frac{9M}{10}$$

$$M = \frac{100}{3}\%$$

$$= \frac{1}{3} \rightarrow \text{Markup}$$

$$= \frac{1}{3} \rightarrow \text{C.P}$$

$$4r \rightarrow 140 \text{ Rs.}$$

$$3r \rightarrow \frac{140}{4} \times 3$$

$$\Rightarrow 105 \text{ Rs.}$$

S9. Ans.(c)

Sol.

Let R be rate of Interest

P → R% → 3 years

P → (R + 3)% → 3 years

$$\frac{P \times R \times 3}{100} + \frac{P \times 3 \times 3}{100} - \frac{P \times R \times 3}{100} = 270$$

$$P = 3000 \text{ Rs.}$$

S10. Ans.(c)

Sol.

$$20 \times 15 \times 10 = \frac{x \times 8 \times 15}{2}$$

$$50 = x$$

S11. Ans.(d)

Sol.

Time = 2 years

Rate = 4%

Compound interest = Rs. 102

$$\text{CI for 2 years} = R + R + \frac{R \times R}{100}$$

Where R → Rate of interest

Combined Rate% of CI for 2 years

$$= 4 + 4 + \frac{4 \times 4}{100} = 8.16\%$$

SI for two years = 2 × 4 = 8%

According to the question SI for 2 years

$$= \frac{102}{8.16} \times 8 = \text{Rs. } 100$$

required simple interest = Rs. 100

TEST SERIES

Bilingual



SSC CGL TIER-II

PRIME

59 Total Tests | eBooks

S12. Ans.(d)

Sol.

Time = 3 years

Rate = 10%

$$\text{CI for 2 years} = 10 + 10 + \frac{10 \times 10}{100} = 21\%$$

$$\text{CI for 3 years} = 10 + 21 + \frac{21 \times 10}{100} = 33.1\%$$

$$\text{SI for 3 years} = 3 \times 10 = 30\%$$

$$\text{Difference in CI and SI} = (33.1 - 30)\% = 3.1\%$$

According to the question,

$$3.1\% \text{ of sum} = \text{Rs. } 31$$

$$1\% \text{ of sum} = \text{Rs. } \frac{31}{3.1}$$

$$\text{Sum} = \text{Rs. } \frac{31}{3.1} \times 100 = \text{Rs. } 1000$$

S13. Ans.(a)

Sol.

Principle	Amount	Time (years)
1	$(2)^1$	15
	↓	↓ ×3
1	$(2)^3$	45 years

required time = 45 years

S14. Ans.(d)

Sol.

Let the principal = Rs. P

Time = 2 years

Amount = Rs. 2.25 P,

Let Rate = R%

By using formula,

$$2.25P = P \left(1 + \frac{R}{100}\right)^2$$

$$\frac{225}{100} = \left(1 + \frac{R}{100}\right)^2$$

$$\left(\frac{15}{10}\right)^2 = \left(1 + \frac{R}{100}\right)^2$$

$$\frac{R}{100} = \frac{15}{10} - 1$$

$$\Rightarrow \frac{R}{100} = \frac{5}{10}$$

$$= 50$$

S15. Ans.(b)

Sol.

	Amount	:	Principal
	3000	:	3993
3 <sup>rd</sup> Year →	$\sqrt[3]{1000}$	:	$\sqrt[3]{1331}$
1 <sup>st</sup> year →	10	:	11
	$\xrightarrow{\quad +1 \text{ units} \quad}$		

Rate%  $\frac{1}{10} \times 100 = 10\%$

S16. Ans.(c)

Sol.

Principal = Rs. 2,000

Amount = Rs. 2420

Rate% = 10%

$$2420 = 2000 \left(1 + \frac{1}{100}\right)^n$$

$$\frac{2420}{2000} = \left(1 + \frac{1}{10}\right)^n$$

$$\frac{121}{100} = \left(\frac{11}{10}\right)^n$$

$$\left(\frac{11}{10}\right)^2 = \left(\frac{11}{10}\right)^n$$

$$= n = 2 \text{ years}$$

required time = 2 years

S17. Ans.(a)

Sol. SI for 1 year

$$\text{SI for 1 year} = 6 + 6 = 12\%$$

CI is compounded half yearly

$$\text{Rate\%} = \frac{12}{2} = 6\%$$

$$t = 1 \times 2 = 2$$

$$\text{Effective Rate\% for 2 half years} = 6 + 6 + \frac{6 \times 6}{100} = 12.36\%$$

According to the question (12.36 - 12)% of sum = Rs .36

$$1\% \text{ of sum} = \frac{36}{0.36}$$

$$100\% \text{ of sum} = \frac{36}{0.36} \times 100 = \text{Rs. } 10,000$$

S18. Ans.(a)

Sol.

Principal = Rs. 2550,

$$\text{Rate\%} = 4\% = \frac{26 \rightarrow \text{Installment}}{25 \rightarrow \text{Principal}}$$

Time = 2 years

SSCadda.com

Complete Preparation for  
SSC Exams

SSC  
EXTREME

Video Courses, Test Series,  
eBooks

	Principal	:	Installment (I)
1st year	25	:	26
Ind years	625	:	676

Installment will be same in both cases.

Principal	:	Installment
650	:	676
625	:	676

According to the question

$$1275 \text{ units} = \text{Rs. } 2550$$

$$1 \text{ unit} = \text{Rs. } \frac{2550}{1275}$$

$$676 \text{ units} = \text{Rs. } \frac{2550}{1275} \times 676$$

$$= \text{Rs. } 1352$$

S19. Ans.(c)

Sol.

$$\text{SI for } 2 \text{ years} = 5 + 5 = 10\%$$

$$\text{CI for } 2 \text{ years} = 5 + 5 + \frac{5 \times 5}{100} = 10.25\%$$

$$\text{Difference} = (10.25 - 10)\%$$

$$= 0.25\%$$

$$0.25\% \text{ of sum} = \text{Rs. } 15$$

$$\text{Sum} = \frac{15}{0.25} \times 100 = \frac{15 \times 10000}{25}$$

$$\text{Sum} = \text{Rs. } 6000$$

S20. Ans.(d)

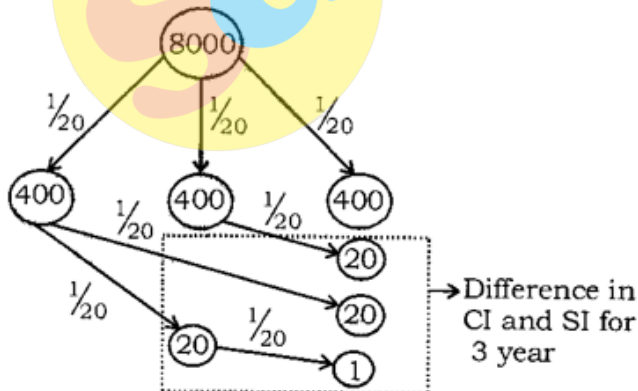
Sol.

$$5\% = \frac{1}{20}$$

$$\text{Let sum} = (20)^3 = 8000 \text{ units}$$

$$\text{Time} = 3 \text{ years}$$

In this question time is 3 years hence so for making calculation easier we assumed sum 8000 units.



According to the question 61 units = Rs. 36.00

$$8000 \text{ units} = \text{Rs. } \frac{36.60 \times 8000}{61}$$

$$\text{Sum} = \text{Rs. } 4800$$

$$\text{sum} = \text{Rs. } 4800$$

S21. Ans.(c)

Sol.

28 Men  $\rightarrow$  1 week  $\rightarrow \frac{7}{8}$  work

Remaining work =  $1 - \frac{7}{8}$

=  $\frac{1}{8}$

$$\frac{28 \times 1}{7/8} = \frac{x \times 1}{1/8}$$

$x = 4$

S22. Ans.(a)

Sol. Per hour efficiency of

$$A \rightarrow \frac{1}{7 \times 6}$$

$$= \frac{1}{42}$$

Per hour efficiency of

$$B = \frac{1}{8 \times 7} = \frac{1}{56}$$

Working together for 8 hours, A + B's 1 day

$$\text{Efficiency} = \frac{8}{42} + \frac{8}{56}$$

$$= \frac{8 + 6}{42}$$

$$= \frac{14}{42} = \frac{1}{3}$$

Together they will complete the work in = 3 days

S23. Ans.(d)

Sol.

Speed of boat in still water =  $\frac{\mu + v}{2}$

$\mu \rightarrow$  downstream speed

$v \rightarrow$  upstream speed

$$= \frac{15 + 9}{2}$$

$$= 24/2 = 12 \text{ km/hr}$$

S24. Ans.(b)

Sol. ATQ,

$$6 \text{ hours} = \frac{60}{A + B}$$

$$A + B = 10 \quad \dots (i)$$

$$5 \text{ hours} = \frac{60}{\frac{2}{3}A + 2B}$$

$$2A + 6B = 36 \quad \dots (ii)$$

$$2A + 2B = 20$$

$$2A + 6B = 36$$

$$\underline{4B = 16}$$

$$B = 4 \text{ km/hr}$$

$$A + 4 = 10$$

$$A = 6 \text{ km/hr}$$



**LIVE** **BILINGUAL**

**ENGLISH BY NEETU SINGH**

**12<sup>th</sup> May**

**Tue, Thr, Sat 5 pm - 7 pm**

**S25. Ans.(d)**

**Sol.** Speed of 1<sup>st</sup> train.

$$= \frac{150}{15} = 10 \text{ m/sec}$$

ATQ,

$$12 \text{ sec} = \frac{150 + 150}{10 + S_2}$$

$$12 \text{ sec} = \frac{300}{10 + S_2}$$

$$10 + S_2 = 25$$

$$S_2 = 15 \text{ m/sec}$$

$$S_2 = 15 \times \frac{18}{5} \text{ km/hr}$$

$$= 54 \text{ km/hr}$$

**S26. Ans.(d)**

**Sol.**

Time taken by A to cover the circular track =  $12/4 = 3$  hr

Time taken by B to cover the circular track =  $12/3 = 4$  hrs

Time taken by C to cover the circular track =  $\frac{12}{3/2} = 8$  hrs

A, B, C will meet at the starting point after

$$= \text{L.C.M (3, 4, 8)}$$

$$= 24 \text{ hours}$$

**S27. Ans.(d)**

**Sol.** ATQ,

Speeds of train =  $48 + 42$

$$= 90 \text{ km/hr}$$

$$= 90 \times \frac{5}{18} = 25 \text{ m/sec}$$

$$12 = \frac{l + \frac{l}{2}}{25}$$

$$12 \times 25 = \frac{3l}{2}$$

$$l = 200 \text{ m}$$

ATQ,

$$200 + \text{platform} = 48 \times \frac{5}{18} \times 45$$

$$200 + P = 600$$

$$P = 400 \text{ m}$$

**S28. Ans.(b)**

**Sol.**

Let speed of the stream  $\Rightarrow x$

A's speed in stream

$$= 12 + x$$

B's speed in stream

$$= 15 - x$$

$$t = \frac{108}{12 + x + 15 - x}$$

$$= \frac{108}{27} = 4 \text{ hours}$$



S29. Ans.(b)

Sol.

Let the speed of Boy  $\rightarrow x$

Speed of Boy in upstream =  $x - 3$

Speed of Boy in downstream =  $x + 3$

ATQ

$$(x + 3)t = 2(x - 3)t$$

$$x + 3 = 2x - 6$$

$$x = 9 \text{ km/hr}$$

S30. Ans.(a)

Sol.

Let C.P  $\rightarrow 100$

	C.P		S.P
	100	$\xrightarrow{15\% \text{ Profit}}$	115
25% less	75	$\xrightarrow{32\% \text{ Profit}}$	99

$$(115 - 99) r \rightarrow \text{Rs. } 600$$

$$16r \rightarrow 600$$

$$100r \rightarrow \frac{600}{16} \times 100 \Rightarrow \text{Rs. } 3750$$

TEST SERIES

Bilingual



SSC CGL 2019-20  
PRIME

400+ TOTAL TESTS

Validity : 12 Months



SSCadda.com