Quant Mega Quiz for SSC CHSL (Solutions)

S1. Ans.(d);

Sol.

$\frac{5}{113} \times \frac{7}{120} \Rightarrow 600 < 791$

$\frac{7}{120} \times \frac{13}{145} \Rightarrow 1015 < 1560$

$\frac{13}{145} \times \frac{17}{160} \Rightarrow 2080 < 2465$

So, $\frac{17}{160}$ is largest

S2. Ans.(b);

Sol.

Nirmit $\Rightarrow \frac{2}{3}$ work=18 $\Rightarrow$ 27 days

Kashish $\Rightarrow \frac{27}{2}$ days, due to double efficiency

it will take half no. of days as Nirmit.

S3. Ans.(b);

Sol.

Area of pool = 30 × 25 = 750

No. of person = 40

So, Rise in level of pool $= \frac{40 \times 5}{30 \times 25} m$

= 26.66 cm

S4. Ans.(c);

Sol.

List price = 2375

Ist successive discount 50% = 1187.5

IInd successive discount 25% = 890.625

spending amount = 890.625 + 165= 1055.625

So, if he earn profit of 62.5% = 1055.625 × 1.625

= 1715.39

S5. Ans.(d);
Sol.
Given that,
Ratio Of length, breath and height= 19 : 11 : 13
& length is 30 cm more than height mean
6 ratio = 30 cm
1 ratio = 5 cm
than volume = (19 × 11 × 13) × 5 × 5 × 5
= 339625

S6. Ans.(c);
Sol. Req. age of coach = 13 × 25 – 12 × 23 = 49

S7. Ans.(b);
Sol.
Successive gain% $= \left[30 + 20 + \frac{30\times20}{100}\right] = 56\%$
So, find selling price, 156% = 31200
So, cost price $= \frac{31200}{156} \times 100 = 20000$

S8. Ans.(c);
Sol.
No. of tree = 17640
For 2 year ago 5% per annum
$= 17640 \times \frac{100}{105} \times \frac{100}{105}$
= 16000

S9. Ans.(a);
Sol.
We know that
$\Rightarrow \frac{S_1}{S_2} = \sqrt{\frac{t_2}{t_1}} \Rightarrow \frac{30}{S_2} = \sqrt{\frac{225}{196}}$
$S_2 = 14 \times 2 = 28$ km/h

S10. Ans.(c);
Sol.
SI for 10 year = 3130
& given that principal becomes 5 times after 5 years
P×r×t/100 =3130
Pr/100=313
ATQ,
Total SI = P×r×5/100 + 5P×r×5/100
= Pr/100(5+25) = 313×30 = 9390

S11. Ans.(d)

Sol.

Maximum earning will be only when he will win on the maximum yielding table

P – 15 : 1
Q – 12 : 1
R – 18 : 1
S – 10 : 1
i.e. he won on P and R but lose on Q and S
$15 \times 150 + 18 \times 150 - 2 \times 150$
$= 4650$
Minimum earning will be when he won on table Q and S and Lose on P and R

$\therefore (12 + 10)\ 150 - 2 \times 150$
$= 3000$
Therefore, difference = 4650 –3000
= 1650

S12. Ans.(b)

Sol.

The density of A_1, A_2 and A_3 are 39, 51, 57 gm/cc

Again Since Volume = $\frac{\text{weight}}{\text{density}}$

Now the weight of A_3 in 1050 kg mixture

$\Rightarrow \frac{1050 \times 7}{15} = 490\ kg.$

Now the Volume of $A_3 = \frac{490}{57}$ liter.

$\therefore$ the cost of $= \frac{490}{57}$ liter Petrol $= \frac{490}{57} \times 38$

$= \frac{980}{3} = \text{Rs } 326.67$

S13. Ans.(d)

Sol.

$(18x + 7) : (7x - 23) = (29x - 4) : (3x - 19)$
Put x =1
5 : -16 = 25 : -16

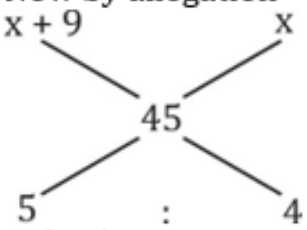
S14. Ans.(b)

Sol.

$\because$ Loss% $\Rightarrow$ 22.22% $= \frac{2}{9}$ loss

Then cost price of mixture $= \frac{35}{7} \times 9 = 45$

Now by allegation



$\Rightarrow \frac{(x+9)-45}{45-x} = \frac{4}{5}$

$\Rightarrow 5x - 180 = 180 - 4x$

$9x = 360$

$x = 40$

$x + 7 = 47$

required sum = 87

S15. Ans.(d)

Sol.

First Ratio = 5 : 7 : 11

Second Ratio = 6 : 9 : 7

$\because$ in third basket no. of apples remains constant.

5×7 : 7×7 : 11×7

Required Ratio

	5×7	:	7×7	: 11×7
$-$	6×11	:	9×11	: 7×11
	31	:	50	: 0

S16. Ans.(b)

Sol.

If Rs. 177.5 are divide in the ratio $\frac{1}{5} : \frac{1}{7} : \frac{1}{3}$ that is, 21: 15: 35 among P, Q and R, then

Share of P = Rs. 52.5

Share of Q = Rs. 37.5

Share of R = Rs. 87.5

If Rs. 177.5 are divided in the ratio 5: 7: 3 among, P, Q and R then

Share of P = Rs. 59.16

Share of Q = Rs. 82.83.

Share of R = Rs. 35.5

Q gained.

S17. Ans.(a)

Sol. Let the initial number of employees be 11x and the employer gives Rs. 19y as wage to each.

Now, according to the question,

$11x \times 19y = 209xy$

And the late bill = $9x \times 23y = 207xy$

∴ Required ratio = 209xy : 207xy = 209 : 207

S18. Ans.(d)

Sol. Let the initial capitals of P and Q be Rs. 4x and Rs. 9x respectively.

Then, Ratio of profits = (4x × 36) : (9x × 24)

= 2 : 3

∴ Q's share = Rs. $\left(39000 \times \frac{3}{5}\right)$ = Rs. 23400

S19. Ans.(C)

Sol.

A B C

$3 : 6 \times \frac{3}{4} : 5$

6 : 9 : 10

Profit = 50,000

50% Reinvested

Hence 50% is distributed which is 50% of 50000=25000

From remaining

Share of C = $\frac{10}{25} \times 25000 = 10{,}000$

S20. Ans.(a)

Sol. If we assume the numbers as 16 and 4 based on 4 : 1 (in option a), the AM would be 10 and the GM = 8 a difference of 20% as stipulated in the question. Option (a) is correct.

S21. Ans.(b)

Sol.

As we know,

AP = AR

BP = BQ

CQ = CR

AB = 7 cm BC = 12 cm AC = 9 cm

Area of Δ = $\sqrt{14\,(7)\,(2)\,(5)} = 14\sqrt{5}$ cm²

S22. Ans.(a)

Sol.

Speed	Time	
24	2	
48	4	
72	6	+2
96	8	

∴ Original speed = 96 km/hr

$33\frac{1}{3}\%$ of original speed = $96 \times \frac{1}{3} = 32$ km/hr

S23. Ans.(b)

Sol.

A		B	
3		5	7——14
$5_{\times 2}$	:	$6_{\times 2}$	1—— 2
10	:	12	

	A	B
Present Age's of A and B —	$(3 \times 2) + 4$	$(5 \times 2) + 4$
	10	14

Sum of present ages of A & B = 24.

S24. Ans.(c)

Sol.

CP	SP	P%	
100	320	220	$\frac{64}{220} \times 100 = 29\%$
125	320	156	

S25. Ans.(b)

Sol.

78y is divisible by 8, So y = 4

$$\frac{9+8+5+x+3+6+7+8+4}{9} = \frac{50+x}{9}$$

So x = 4

x + y = 8