Quantitative Aptitude Mega Quiz for SSC CGL – (Solutions)

S1. Ans.(d)

Sol. Cannot be determined, As the total runs in matches are not given.

S2. Ans.(a)

Sol. Difference between runs scored by Jadeja and Rahane

Match I = 25-20 = 5

Match II = 15-0=15

Match III = 70-30 = 40

Match IV = 40-35 = 5

Maximum difference = 40 runs.

S3. Ans.(b)

Sol. Total runs scored by all the batsmen in all 4 matches.

1. Dhoni = 10+50+35+60 =155

2. Jadeja = 25+15+70+40 = 150

3. Kohli = 40+35+55+50 = 180

4. Rahane = 20+0+30+35 = 85

Least runs are scored by Rahane.

S4. Ans.(b)

Sol.

Runs scored by Rahane in Match III = 30

Required Share = $\frac{30}{225} \times 100\% = 13\frac{1}{3}\%$

S5. Ans.(b)

Sol.

No. of respondent below 31 = 66

Total no. of blues lover below 31 = 5

Required % = $\frac{500}{66} \approx 7.6\%$

S6. Ans.(a)

Sol. Respondent of age group (21-30) of favorite style other than Rock music = 33 – 12 = 21

Required percentage = $\frac{21}{33} \times 100\% \approx 64\%$

S7. Ans.(d)

Sol.

Total no. of people will Jazz as favorite style = 16
Total respondent = 134
Required % = $\frac{16}{134} \times 100\% \approx 12\%$

S8. Ans.(c)

Sol.

Jazz = $\frac{11-1}{1} \times 100 = 1000\%$

S9. Ans.(c)

Sol.

Number of seats in Mechanical branch
$= \frac{400 \times 30}{100} = 120$

S10. Ans.(c)

Sol.

Mechanical + Civil
$= (30 + 25) = 55\%$
100% seats are shown by 360°
∴ 55% seats are shown by $\frac{360}{100} \times 55 = 198°$

S11. Ans.(b);
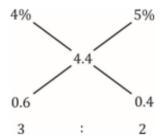
Sol.

Let the rate of interest (final) = R%
$880 = \frac{10000 \times R \times 2}{100}$
$4.4\% = R$

4%   5%

        4.4

0.6   0.4

3   :   2

Ratio = 3: 2

S12. Ans.(d)
Sol.
Let sum = x. Then, S.I. = $\frac{16}{25}$x

Let rate = R% and time = R years.

$\therefore \left(\frac{x \times R \times R}{100}\right) = \frac{16x}{25} \Leftrightarrow R^2 = \frac{1600}{25} \Leftrightarrow R = \frac{40}{5} = 8$

Hence, time = 8 years.

S13. Ans.(b)
Sol.
S.I. at 7% for 10 years

$= 4000 \times \frac{70}{100} = 2800$

$\therefore$ Required Amount

= Rs. 5240 + Rs. 2800 = Rs. 8040

S14. Ans.(a)
Sol.
Amount remaining after

1 yr = $8000\left(1 + \frac{8.5}{100}\right) - 2100 = Rs. 6580$

2 yr = $6580\left(1 + \frac{8.5}{100}\right) - 2100 = Rs. 5039.3$

S15.Ans.(d);
Sol.
Interest on 4500 = $\frac{4500 \times 5 \times 13}{100} = 2925$

Interest on 2nd amount

= 5694 − 2925 = 2769

$2769 = \frac{P \times 5 \times 13}{100}$

P = 4260

S16.Ans.(a);
Sol.
$653.10 = \frac{P \times 3.15 \times 1}{100}$

P = 8866.67

S17. Ans.(a)
Sol.

Borrow Money	Interest 20%	Amount	Money after Payback Rs. 1800
4000	800	4800	(4800 - 1800) = 3000
3000	600	3600	(3600 - 1800) = 1800
1800	360	2160	2160

At the end of third year or starting of 4th year he should pay Rs. 2160 to clear all his dues.

S18. Ans.(d)

Sol. Let the principal be Rs. P and rate of interest be R% per annum.

Difference of C.I. and S.I. for 2 years

$$= \left[P \times \left(1 + \frac{R}{100}\right)^2 - P \right] - \left(\frac{P \times R \times 2}{100}\right) = \frac{PR^2}{10^4}$$

Difference of C.I. and S.I. for 3 years

$$= \left[P \times \left(1 + \frac{R}{100}\right)^3 - P \right] - \left(\frac{P \times R \times 3}{100}\right) = \frac{PR^2}{10^4}\left(\frac{300+R}{100}\right)$$

$$\therefore \frac{\frac{PR^2}{10^4}\left(\frac{300+R}{100}\right)}{\frac{PR^2}{10^4}} = \frac{25}{8} \Rightarrow \left(\frac{300+R}{100}\right) = \frac{25}{8} \Rightarrow R = \frac{100}{8} = 12\frac{1}{2}\%.$$

S19. Ans.(c)

Sol. Let 1st number is X and 2nd number is Y

Atq,

111% of X = 118.5% of Y

$$\frac{X}{Y} = \frac{237}{222}$$

= (237+222)Unit = 51867

1unit = Rs. 113

Required = 26781 and 25086

S20. Ans.(d)

Sol.

The sum be $= \frac{412.50 \times 100}{\left(\frac{9}{2} - \frac{7}{2}\right) \times 11}$

= Rs. 3750

S21. Ans.(b)

Sol.

Let the number of days he was absent be x days.

210 (48 – x) – 30 x = 5640

10080 – 210x – 30x = 5640

240x = 4440

x = 4440/240 = $18\frac{1}{2}$ days

S22. Ans.(b)

Sol. Dev, Manish and Ankit together can finish the work in 4 days.

Dev and Manish together can do it in 24/5 days

Manish and Ankit together can do it in 8 days. Therefore, Dev alone can complete the work in

$$= \frac{XY}{Y-X} \text{ days}$$

$$= \left(\frac{8 \times 4}{8-4}\right) \text{ days}$$

[Here, X = 4 and Y = 8]

= 8 days.

So, Manish alone can complete the work in

$$= \left(\frac{XY}{Y-X}\right) days = \left(\frac{\frac{24}{5} \times 8}{8 - \frac{24}{5}}\right) days$$

$$\left[Here, Y = 8 \text{ and } X = \frac{24}{5}\right]$$

= 12 days.

S23. Ans.(a)
Sol. Here, a = 4, b = 6, n = 20, c = 6 and d = 11

If a men or b women complete a work in n days then time taken by c men and d women to complete the same work

$$= \left(\frac{nab}{bc + ad}\right) days$$

$$= \left(\frac{20 \times 4 \times 6}{6 \times 6 + 4 \times 11}\right) days$$

= 6 days.

When work is triple than no. of days= 18 days. .

S24. Ans.(b)
Sol.

Obviously.,

(5M + 2B) = 4(1M + 1B)

∴ M = 2B

∴ Work done by a man and a boy are in the ratio 2: 1.

S25. Ans.(b)
Sol.

Suppose, Anthoni alone can do this work in x days

∴ Anthoni will do $\frac{1}{x}$ work in 1 day

Now, work done by (Akbar + Anthoni) in 1 day = $\frac{1}{16}$

∴ Work done by Akbar in 1 day = $\left(\frac{1}{16} - \frac{1}{x}\right)$

And, work done by (Amar +Akbar) in 1 day = $\frac{1}{12}$

∴ Work done by Amar in 1 day = $\frac{1}{12} - \left(\frac{1}{16} - \frac{1}{x}\right)$

$= \frac{1}{48} + \frac{1}{x}$

As per the question,

Work done by Amar in 5 days + work done by Akbar in 7 days + + work done by Anthoni in 13 days = whole work

∴ $5\left(\frac{1}{48} + \frac{1}{x}\right) + 7\left(\frac{1}{16} - \frac{1}{x}\right) + \frac{13}{x} = 1$

Or, $\frac{5}{48} + \frac{5}{x} + \frac{7}{16} - \frac{7}{x} + \frac{13}{x} = 1$

Or, $\frac{26}{48} + \frac{11}{x} = 1$, or, $\frac{11}{x} = 1 - \frac{26}{48}$

Or, $\frac{11}{x} = \frac{22}{48}$, or, x = 24

∴ Anthoni alone would complete this work in 24 days.