Quant Mega Quiz for SSC CGL Tier – 2 (Solutions)

S1. Ans.(b)
Sol.
Let time travel by A and B = t hour
Then required ratio $= \frac{800/t}{700/t} = 8:7$

S2. Ans.(d)
Sol.
$$\text{Average} = \frac{550+650+900}{3} = 700$$

S3. Ans.(c)
Sol. Distance travel by C all over days
= 740 + 250 + 1150 + 700 + 660 = 3500 km
Distance travel by all vehicle on Wednesday
= 700 + 850 + 1150 + 250 + 525 = 3475 km
Difference = 25 km

S4. Ans.(d)
Sol.
$$\text{Ratio} = \frac{650+100+250}{525+440+900} = \frac{1000}{1865} = \frac{200}{373}$$

S5. Ans.(a)
Sol.
Distance travel by D and E on Friday = 1400 km
Distance travel by A, B and C on Tuesday = 1750
Required percentage $= \frac{350}{1750} \times 100 = 20\%$

S6. Ans.(d)
Sol.
$$\text{Growth rate} = \frac{\text{Final value} - \text{Initial value}}{\text{Initial value}} \times 100$$
$$\text{Nokia} = \frac{105-69}{69} \times 100 = \frac{36}{69} \times 100 \simeq 52\%$$
$$\text{Samsung} = \frac{122-91}{91} \times 100 = \frac{31}{91} \times 100 = 34.06\%$$
$$\text{MI} = \frac{103-71}{71} \times 100 = \frac{32}{71} \times 100 = 45\%$$

$\text{Moto} = \frac{25-15}{15} \times 100 = \frac{10}{15} \times 100 = 66.67\%$

$\text{Lenovo} = \frac{163-100}{100} \times 100 = \frac{63}{100} \times 100 = 63\%$

Hence, Moto witnessed highest growth rate in production from 2006 to 2012

S7. Ans.(a)

Sol.

Total Nokia phones= 620 *thousand*

Total MI phones= 605 *thousand*

required percentage $\frac{620}{605} \times 100 \simeq 102\%$

S8. Ans.(b)

Sol.

Total production of the company Nokia.

= 69 + 75 + 81 + 98 + 93 + 99+ 105

= 620 (in thousands)

Total production of company Lenovo

= 100 + 120 + 102 + 131 + 143 + 154 + 163

= 913 (in thousands)

$\therefore \text{Ratio} = \frac{620}{913} = 620 : 913$

S9. Ans.(a)

Sol. Total phones produced in 2008=380 thousand

Total phones produced in 2011=486 thousand

Required ratio=190:243

S10. Ans.(c)

Sol.

Growth rate in production of company from nokia 2006 to 2010

$Nokia = \frac{93-69}{69} \times 100 = \frac{24}{69} \times 100 = 34.78\%$

$\text{Samsung} = \frac{110-91}{91} \times 100 = \frac{19}{91} \times 100 = 20.879\%$

$\text{MI} = \frac{92-71}{71} \times 100 = \frac{21}{71} \times 100 = 29.577\%$

$\text{Moto} = \frac{24-15}{15} \times 100 = \frac{9}{15} \times 100 = 60\%$

$\text{Lenovo} = \frac{143-100}{100} \times 100 = \frac{43}{100} \times 100 = 43\%$

From above, samsung has witnessed minimum growth rate.

S11. Ans.(b)

Sol.

Total no. of beauty products sold by Nivea and Loreal together

$= \frac{(72+90)}{360} \times 216000$

= 97,200

Total no. of beauty products sold by Lakme and Oriflame together

$= \frac{(96+27)}{360} \times 216000$

$= 73,800$

$\therefore$ Required percentage $= \frac{97200-73800}{73800} \times 100 \simeq 32\%\ more$

Alternative method:

Required percentage $= \frac{162-123}{123} \times 100 \simeq 32\%$ more

S12. Ans.(c)

Sol.

Since $33\frac{1}{3}\% \rightarrow \frac{1}{3}$

$16\frac{2}{3}\% \rightarrow \frac{1}{6}$

$\therefore$ other beauty cream $= 1-\left(\frac{1}{3}+\frac{1}{6}\right) = \frac{1}{2}$ or 50%

$\therefore$ other beauty cream sold by Nivea

$= \frac{50}{100} \times \frac{72}{360} \times 216000$

$= 21,600$

S13. Ans.(a)

Sol.

Required average no. of beauty products

$= \frac{1}{3} \times \frac{(96+45+30)}{360} \times 216000$

$= \frac{1}{3} \times 1,02,600$

$= 34,200$

S14. Ans.(d)

Sol.

Required ratio $= \frac{(90+30)}{45+27}$

$= \frac{120}{72}$

$= \frac{5}{3}$

S15. Ans.(c)

Sol.

Let cost price of each Lakme product = Rs. x

$\therefore$ Total C.P. $= \frac{96}{360} \times 216000x = 57,600x$

ATQ,

$57600x \times \frac{125}{100} = 17,28,000$

$\therefore x = 24$

S16. Ans.(d)
Sol. Required Difference =128-100=28 thousand = 28000

S17. Ans.(c)
Sol. Total number of watches sold by Titan in the given year =119+99+141+78+120+159
= 716 thousand
Total number of watches sold by HMT in the given year =139+120+100+128+107+148
= 742 thousand
Difference =742-716 = 26 thousand = 26,000

S18. Ans.(a)
Sol.
Average number of watches sold by Titan
Over the given period $= \frac{716}{6}$
$= 119\frac{1}{3}$ thousand

S19. Ans.(d)
Sol.
Difference in 2002 = $139 - 119 = 20$ thousand
Difference In 2003 = $120 - 99 = 21$ thousand
Difference In 2004 = $141 - 100 = 41$ thousand
Difference In 2005 = $128 - 78 = 50$ thousand (maximum)
Difference In 2006 = $120 - 107 = 13$ thousand
Difference In 2007 = $159 - 148 = 11$ thousand

S20. Ans.(d)
Sol.
Required percentage $= \frac{100}{141} \times 100$
= 72 % (approx.)

S21. Ans.(d)
Sol. Male voters in Lucknow & Barabanki: Female voters in Jhansi, Mathura and Gorakhpur
= (45 + 20) : (40 + 25 + 15)
= 65 : 80
= 13 : 16

S22. Ans.(d)
Sol. Total number of male voters in all cities together
= (45 + 25 + 20 + 35 + 40) thousands
= 165 thousand

S23. Ans.(a)

Sol.

Male voters in Gorakhpur, Barabanki and Mathura

= (25 + 20 + 40) thousands

= 85 thousand

Female voters in Lucknow, Barabanki and Jhansi

= (35 + 30 + 25) thousands = 90 thousands

Required percentage = $\frac{90-85}{90} \times 100\%$

= 5.56% less

$\simeq$ 5.5% less

S24. Ans.(a)

Sol.

Total married voters in Lucknow and Mathura together

= (40 + 25) thousand $\times \frac{45}{100}$

= 65000 $\times \frac{45}{100}$

= 29,250

S25. Ans.(c)

Sol.

Male voters in all cities = (45 + 25 + 20 + 35 + 40) thousand

= 165 thousand

Female voters in all cities = (35 + 40 + 30 + 25 + 15) thousand

= 145 thousand

Required difference = 165 – 145

= 20 thousand

S26. Ans.(d)

Sol.

Required percentage increase = $\frac{9-8}{8} \times 100 = 12.5\%$

S27. Ans.(a)

Sol.

Required difference

= (5 + 4 + 7 + 6 + 4 + 7) – (8 + 6 + 7)

= 33 – 21

= 12 thousand

S28. Ans.(b)
Sol.
Required average no.

$$= \frac{1}{6} \times (3 + 5 + 6 + 8 + 7 + 5)$$
$$= \frac{1}{6} \times 34$$
$$= 5.6666 \text{ thousands}$$
$$\simeq 5666$$

S29. Ans.(c)
Sol. From the graph, it is clear that the second highest no. of bottles were in year 2005.

S30. Ans.(a)
Sol.

$$\text{Required percentage} = \frac{(5+7)}{8} \times 100 = 150\%$$