

SBI Clerk Prelims Practice Set for Quantitative Aptitude (Solutions)

S1. Ans.(e)

$$\begin{aligned}\text{Sol. } \sqrt{5776} - \sqrt{1444} + \sqrt{729} &= 43 + ? \\ 76 - 38 + 27 &= 43 + ? \\ ? &= 65 - 43 = 22\end{aligned}$$

S2. Ans.(a)

$$\begin{aligned}\text{Sol. } 78 \times 26 \div 6 + 1262 &= 1311 + (?)^2 \\ 2028 \div 6 + 1262 &= 1311 + (?)^2 \\ 338 + 1262 &= 1311 + (?)^2 \\ (?)^2 &= 1600 - 1311 = 289 \\ ? &= \sqrt{289} = 17\end{aligned}$$

S3. Ans.(a)

$$\begin{aligned}\text{Sol. } 1484 \div 28 + 1462 \div 34 - 12 \times 7 &= ? \\ ? &= 53 + 43 - 84 = 12\end{aligned}$$

S4. Ans.(c)

$$\begin{aligned}\text{Sol. } 42.5 \times 15 + 37.5 \times 25 &= 1420 + ? \\ 637.5 + 937.5 &= 1420 + ? \\ ? &= 1575 - 1420 = 155\end{aligned}$$

S5. Ans.(b)

$$\begin{aligned}\text{Sol. } 2450 + 3760 - 3830 &= 6000 - ? \\ 2380 &= 6000 - ? \\ ? &= 6000 - 2380 = 3620\end{aligned}$$

S6. Ans.(b)

$$\begin{aligned}\text{Sol. } \sqrt{\frac{3840}{60} + \frac{1440}{40} - \frac{1330}{70}} \\ = \sqrt{64 + 36 - 19} \\ = \sqrt{81} \\ = 9\end{aligned}$$

S7. Ans.(c)

$$\begin{aligned}\text{Sol. } 25 \times 18 + \frac{4200}{40} - \frac{525}{105} &= 740 - ? \\ 450 + 105 - 5 &= 740 - ? \\ ? &= 740 - 550 \\ &= 190\end{aligned}$$



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S8. Ans.(d)

Sol. $3845+4380+2640 - 5965 = (?)^2$

$$(?)^2=10865 - 5965$$

$$=4900$$

$$?=\sqrt{4900}$$

$$=70$$

S9. Ans.(b)

Sol. $400 \div 20 \times 35 + 6666 \div 33 + ? = 1100$

$$20 \times 35 + 202 + ? = 1100$$

$$? = 1100 - (700 + 202)$$

$$= 1100 - 902$$

$$= 198$$

S10. Ans.(b)

Sol. $28 \times 14.5 + 1680 \div 15 + 445 = 1000 - ?$

$$406 + 112 + 445 = 1000 - ?$$

$$963 = 1000 - ?$$

$$? = 1000 - 963 = 37$$

S11. Ans.(d)

Sol. Hockey players in school X and school Z together in year 2016

$$= \frac{80}{(60-40)} \times 60 + \frac{180}{(80-20)} \times 80$$

$$= 240 + 240 = 480$$

Cricket players in same schools together in year 2017

$$= \frac{120}{(80-20)} \times 80 + \frac{160}{(52-48)} \times 48$$

$$= 160 + 1920 = 2080$$

$$\text{Required difference} = 2080 - 480 = 1600$$

S12. Ans.(a)

Sol. Cricket players in school K and L together in year 2016

$$= \frac{320}{(70-30)} \times 70 + \frac{100}{(55-45)} \times 55$$

$$= 560 + 550 = 1110$$

Hockey players in school Y in year 2017

$$= \frac{80}{(55-45)} \times 55 = 440$$

$$\text{Required percentage} = \frac{1110}{440} \times 100$$

$$= 252 \frac{3}{11} \%$$



S13. Ans.(b)**Sol.** Required average

$$= \frac{1}{3} \left[\frac{150}{(75-25)} \times 25 + \frac{180}{(80-20)} \times 20 + \frac{160}{(52-48)} \times 48 \right]$$

$$= \frac{1}{3} [75 + 60 + 1920]$$

$$= \frac{2055}{3} = 685$$

S14. Ans.(e)**Sol.** Required ratio

$$= \frac{\frac{80}{(55-45)} \times 55}{\frac{100}{(55-45)} \times 55}$$

$$= \frac{440}{550}$$

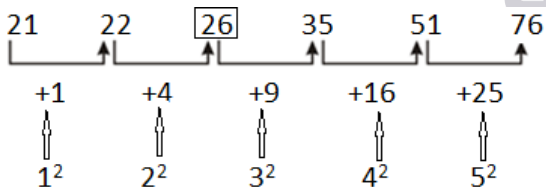
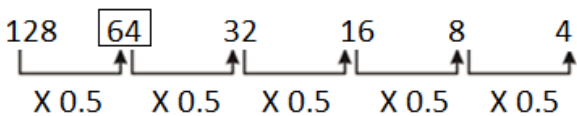
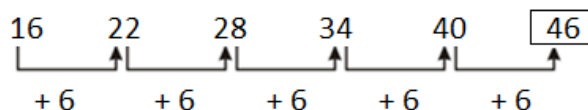
$$= \frac{4}{5} = 4 : 5$$

S15. Ans.(c)**Sol.** Required percentage

$$= \frac{\frac{140}{(60-40)} \times 40 \sim \frac{320}{(70-30)} \times 70}{\frac{320}{(70-30)} \times 70} \times 100$$

$$= \frac{280 \sim 560}{560} \times 100$$

$$= 50\%$$

S16. Ans.(d)**Sol.****S17. Ans.(a)****Sol.****S18. Ans.(b)****Sol.**

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S19. Ans.(e)**Sol.**

$$\begin{array}{cccccc}
 1 & 8 & 27 & \boxed{64} & 125 & 216 \\
 \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\
 1^3 & 2^3 & 3^3 & 4^3 & 5^3 & 6^3
 \end{array}$$

S20. Ans.(c)**Sol.**

$$\begin{array}{cccccc}
 20 & \boxed{11} & 12 & 19 & 39 & 98.5 \\
 \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\
 X0.5+1 & X1+1 & X1.5+1 & X2+1 & X2.5+1 &
 \end{array}$$

S21. Ans.(a)

Sol. required average = $\frac{7.5 \times 6 + 8.5 \times 2 + 42}{10} = 10.40 \text{ run/over}$

S22. Ans.(d)**Sol.** let CP be Rs. x

$$SP \text{ (Johny)} = \frac{110}{100} \times x = Rs. 1.1x$$

Since Jini calculate profit at SP

$$\frac{SP-x}{SP} \times 100 = 10$$

$$10SP - 10x = SP$$

$$SP = Rs. \frac{10}{9}x$$

$$\text{Required ratio} = 1.1x : \frac{10x}{9} = 99 : 100$$

**S23. Ans.(b)****Sol.** let red covers be 'x'

$$\text{ATQ, } \frac{x}{5} = 0.6 \Rightarrow x = 3$$

$$\text{Green covers} = 5 - 3 = 2$$

S24. Ans.(e)**Sol.** no boy sit together means boys will sit alternately

$$\text{Ways to arrange girls} = 5!$$

Now in alternate order, 6 places will be available to arrange boys

$$\text{Ways to arrange boys} = {}_6C_3$$

$$\text{Total ways} = 5! \times {}_6C_3 = 2400$$

S25. Ans.(a)

$$\text{Sol. total distance} = 4 \times \frac{30}{60} + 10 \times \frac{20}{60} + 50 \times \frac{10}{60} = \frac{41}{3} \text{ kms}$$

$$\text{Total time taken} = 30 + 20 + 10 = 60 \text{ minutes} = 1 \text{ hour}$$

$$\text{Average speed} = \frac{\frac{41}{3}}{1} = \frac{41}{3} \text{ kmph} = 13.67 \text{ kmph}$$

S26. Ans.(b)

Sol. Let the length(l) and breadth(b) of the rectangle be $20x$ and $10y$ respectively.

Area of the rectangle = $l \times b = 20x \times 10y = 200xy$

When length and breadth of the rectangle is increased by 20% and 10% respectively,

then new length and new breadth of rectangle will be $24x$ and $11y$ respectively

new area of rectangle = $24x \times 11y = 264xy$

% increase in area of the rectangle = $\frac{264xy - 200xy}{200xy} \times 100$

= 32%

S27. Ans.(c)

Sol. Here, Pipe A alone and Pipe B alone can fill the tank in 20 min and 30 min respectively and Pipe C alone can empty the tank in 10 min

Then, total work = 60 units

Therefore, efficiency of pipe A and pipe B are 3 units/min and 2 units/min respectively and efficiency of pipe C is 6 units/min

Total efficiency when all 3 pipes are opened simultaneously = $3 + 2 - 6 = -1$ unit/min

Total time taken to empty the tank if the tank is completely full = $\frac{60}{1}$

= 60 min (as total efficiency of all 3 pipes is -1)

S28. Ans.(a)

Let R be effective interest and P be principal amount

So, $R = \frac{20}{2} = 10\%$

And, period of time = $2 \times 2 = 4$ (as it is compounded half-yearly)

C.I = $P \left(1 + \frac{R}{100}\right)^4 - P$

= $4000 \left(1 + \frac{10}{100}\right)^4 - 4000$

= Rs 1856.4

S29. Ans.(a)

There are 7 green, 6 blue and 5 red balls in a basket

Required probability (both being green or red) = $\frac{{}^7C_2 + {}^5C_2}{{}^{18}C_2} = \frac{31}{153}$

S30. Ans.(b)

The container is full of 75 litre milk

Required quantity of milk = $75 \left(1 - \frac{15}{75}\right)^3$

= $75 \left(1 - \frac{1}{5}\right)^3 = 38.4$ litres

S31. Ans.(a)

Sol. I. $2x^2 + 10x + 12 = 0$

$2x^2 + 6x + 4x + 12 = 0$

$(2x + 4)(x + 3) = 0$

$x = -3, -2$

II. $y^2 + 10y + 25 = 0$

$y^2 + 5y + 5y + 25 = 0$

$(y + 5)(y + 5) = 0$

$y = -5$

$\therefore x > y$

S32. Ans.(a)

Sol. I. $x^2 - 3x - 2x + 6 = 0$

$(x - 3)(x - 2) = 0$

$x = +3, +2$

II. $y^2 + 6y + y + 6 = 0$

$(y + 1)(y + 6) = 0$

$y = -1, -6$

$\therefore x > y$

S33. Ans.(d)

Sol. I. $x = \pm 25$

II. $y = +25$

$\therefore x \leq y$

S34. Ans.(a)

Sol. (I) $\times 2 -$ (II)

$-6y + 2y = -16$

$y = 4$

$x = 6$

$x > y.$

S35. Ans.(e)

Sol. I. $x = +11$

$y = +11$

$\therefore x = y$



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