Quiz Date: 26 ${ }^{\text {th }}$ September 2020
Q1. A and B can do a piece of work in 30 days and 40 days respectively. A and B together started the work but after some days B left the work and whole work completed in 21 days. Find out after how many days $B$ left the work?
(a) 15 days
(b) 12 days
(c) 14 days
(d) 8 days
(e) 10 days

Q2. A, B and C can do a piece of work in 12 days, 18 days and 24 days respectively. All of them started the work together but after 4 days, A left the work and 2 days before the completion of the work, B left. In how many days total work will be completed in this manner?
(a) 15 days
(b) 12 days
(c) 14 days
(d) 8 days
(e) 10 days

Q3. Ravi bought two articles for Rs. 380 together and sold both article at the same price. He sold $1^{\text {st }}$ article at the profit of $10 \%$ and $2^{\text {nd }}$ article at the loss of $10 \%$. Find out the difference between their cost price?
(a) Rs. 54
(b) Rs. 44
(c) Rs. 38
(d) Rs. 42
(e) Rs. 45


Q4. Anurag purchased an article and sold it at the loss of $12 \frac{1}{2} \%$, again with use of this money he purchased a new article and sold it at the profit of $14 \frac{2}{7} \%$. Find out over all profit or loss in the whole transaction.
(a) $12.5 \%$ profit
(b) $33 \frac{1}{3} \%$ profit
(c) $12.5 \%$ loss
(d) $33 \frac{1}{3} \%$ loss
(e) neither profit nor loss

Q5. A and B invest their capital in the ratio of 2:3 but they donate the $5 \%$ of the total profit (at the end of the year) and remaining profit distributed between A and B in the terms of their capital. If B gets Rs. 323 more than profit of A. Find out the total profit?
(a) Rs. 800
(b) Rs. 1300
(c) Rs. 1200
(d) Rs. 1700
(e) Rs. 1900

Q6. Average weight of girls in a college is 48 kg and average weight of boys in the college is 56 kg . find out the average weight of total students if ratio of number of boys and girls in the college is 2:3.
(a) 51.2 kg
(b) 56.6 kg
(c) 53.2 kg
(d) 49.6 kg
(e) 52.4 kg

Q7. The ratio of ages of $M$ and $N$ is 5:6 and that of $M$ and 0 is 7:9. 5 years ago the age difference of $\mathrm{N}^{\prime}$ age and 0 ' age is 3 years. Find out the average of present age of M and 0 .
(a) 35 years
(b) 40 years
(c) 42 years
(d) 38 years
(e) 44 years

Q8. A 500-meter-long train crosses a pole in 12 sec . find out the time taken by train to cross a 900 -meter-long platform?
(a) 33 sec
(b) 31 sec
(c) 34 sec
(d) 32 sec
(e) 33.6 sec


Q9. Two trains A and B crosses each-other in 8 sec when running in opposite direction and in 72 sec in same direction. Find out the ratio of speed of trains?
(a) $5: 4$
(b) $4: 3$
(c) $7: 5$
(d) $7: 3$
(e) $5: 3$

Q10. A car travels half distance at 70 kmph and half of remaining distance at the speed of 50 kmph and remaining distance cover by 45 kmph . Find out the average speed of the car?
(a) 62 kmph
(b) 54 kmph
(c) 56 kmph
(d) 56.50 kmph
(e) 60 kmph

## Directions (11-15): What will come in the place of question (?) mark:

Q11. $3 \frac{5}{7}$ of $2 \frac{9}{13}$ of $135-35 \%$ of $440=$ ?
(a) 1250
(b) 1324
(c) 1196
(d) 1036
(e) 996

Q12. $31 \%$ of $700+27 \%$ of $800=?+35 \%$ of 440
(a) 270
(b) 389
(c) 290
(d) 279
(e) 359

Q13. $\frac{1919}{1900}-\frac{2121}{2100}+\frac{9900}{9000}+\frac{1313}{1300}=$ ?
(a) 2.1
(b) 2.7
(c) 2.2
(d) 2.9
(e)2.11

Q14. $\sqrt[3]{2197}+\sqrt{7056} \div \sqrt[3]{1728} \times \sqrt[4]{81}=$ ?
(a) 34
(b) 25
(c) 16
(d) 13
(e)21

Q15. $1323 \times 8 \div 7938+178 \div 267=$ ?
(a) 1
(b) 3
(c) 1.3
(d) 3.5
(e)2

## Solutions

S1. Ans. (b)
Sol.
Efficiency of $A=\frac{1}{30}$
Efficiency of $B=\frac{1}{40}$
Since A present all days so, total work done by A
$=21 \times \frac{1}{30}=\frac{7}{10}$

Rest of work completed by B (1-7 $\left.\frac{7}{10}=\frac{3}{10}\right)$
So, time taken by $B$ to complete remaining work
$=\frac{\frac{3}{10}}{\frac{1}{40}}=12$ days
S2. Ans. (d)
Sol.
Efficiency of $\mathrm{A}=\frac{1}{12}$
Efficiency of $B=\frac{1}{18}$
Efficiency of $\mathrm{C}=\frac{1}{24}$
All work at begging 4 days so, total work by all of them
$=4\left(\frac{1}{12}+\frac{1}{18}+\frac{1}{24}\right)=\frac{13}{18}$
Last 2 days work by only C
Total work $=2 \times \frac{1}{24}=\frac{1}{12}$
Rest of work done by B and C together ( $1-\frac{13}{18}-\frac{1}{12}$ ) $=\frac{7}{36}$
$=\frac{\frac{7}{36}}{\frac{1}{18}+\frac{1}{24}}=2$ days
Required time $=4+2+2=8$ days.
S3. Ans. (c)
Sol.
Since selling price of both articles are equal and let cost price of both articles is $x$ and $y$ unit respectively.
ATQ,
$\frac{110}{100} \times x=\frac{90}{100} \times y$
$\frac{x}{y}=\frac{9}{11}$
So, cost price of both articles are $9 p$ and 11 p respectively.
Required difference $=\frac{2 p}{20 p} \times 380=R s .38$
S4. Ans. (e)
Sol. Let cost price $=R s . x$
ATQ,
Final selling price $=x \times \frac{87 \frac{1}{2}}{100} \times \frac{114 \frac{2}{7}}{100}$

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

So, neither profit nor loss.
S5. Ans. (d)
Sol.
Let total profit $=$ Rs. $100 x$
Remaining profit (after donation) $=$ Rs. $95 x$

ATQ,
$\frac{3}{5} \times 95 x-\frac{2}{5} \times 95 x=323$
$x=17$
So, total profit $=100 x=$ Rs. 1700
S6. Ans. (a)
Sol.
Let number of boys and girls in the college is $2 x$ and $3 x$ respectively.
Required average $=\frac{48 \times 3 x+56 \times 2 x}{5 x}=51.2 \mathrm{~kg}$
S7. Ans. (b)
Sol.
ATQ,
$\mathrm{M}: \mathrm{N}: \mathrm{O}=35: 42: 45$ or (35x : 42x : 45x)
ATQ, $45 \mathrm{x}-42 \mathrm{x}=3$
$\mathrm{x}=1$
Age of $\mathrm{M}, \mathrm{N}$ and 0 will be 35,42 and 45 years respectively.
Average of M and $\mathrm{O}=\frac{35+45}{2}=40$ years
S8. Ans. (e)
Sol.
speed of train $=\frac{500}{12}=\frac{125}{3} \mathrm{~m} / \mathrm{s}$
required time $=\frac{900+500}{\frac{125}{3}}=33.6 \mathrm{sec}$
S9. Ans. (a)
Sol. Let speed of trains A and B is $\mathrm{S} 1 \mathrm{~m} / \mathrm{s}$ and $\mathrm{S} 2 \mathrm{~m} / \mathrm{s}$ respectively and sum of length of both trains is D m.
ATQ,
$\mathrm{S} 1+\mathrm{S} 2=\frac{D}{8}$ $\qquad$
S1-S2 $=\frac{D}{72}$
On solving both equations
S1 $=\frac{5 D}{72}$
S2 $=\frac{D}{18}$
So, ratio of speed of trains $=\frac{5 D}{72}: \frac{D}{18}=5: 4$
S10. Ans. (d)
Sol.
Let total distance $=\mathrm{D}$ km.
And average speed $=\mathrm{Skm} / \mathrm{h}$.
ATQ,
$\frac{D}{2 \times 70}+\frac{D}{4 \times 50}+\frac{D}{4 \times 45}=\frac{D}{S}$
$\mathrm{S}=56.50 \mathrm{kmph}$

S11. Ans.(c)
Sol.
$?=\frac{26}{7} \times \frac{35}{13} \times 135-\frac{35}{100} \times 440$
$=1350-154$
= 1196

S12. Ans.(d)
Sol.
? $=31 \times 7+27 \times 8-35 \times 4.4$
$=217+216-154$
$=279$

S13. Ans (e)
Sol. $\frac{1919}{1900}-\frac{2121}{2100}+\frac{9900}{9000}+\frac{1313}{1300}=$ ?
? $=1.01-1.01+1.1+1.01$
?=2.11

S14. Ans (a)
Sol. $\sqrt[3]{2197}+\sqrt{7056} \div \sqrt[3]{1728} \times \sqrt[4]{81}=$ ?
? $=13+84 \div 12 \times 3$
? = 34

S15. Ans (e)
Sol. $1323 \times 8 \div 7938+178 \div 267=$ ?

$$
\begin{aligned}
& ?=1323 \times \frac{8}{7938}+\frac{178}{267} \\
& =\frac{4}{3}+\frac{2}{3} \\
& ?=2
\end{aligned}
$$

