Quiz Date: 26th August 2020

Q1. Bharat and Priyanka can do a piece of work in 45 and 40 days respectively. They began the work together, but Bharat leaves after some days and Priyanka finished the remaining work in 23 days. After how many days did Bharat leave?
(a) 7 days
(b) 8 days
(c) 9 days
(d) 11 days
(e) 13 days

Q2. A pipe can fill a tank in 15 minutes and another pipe in 10 minutes. A third pipe can empty the tank in 5 minutes. The first two pipes are kept open for 4 minutes in the beginning and then the third pipe is also opened. In what time will the tank be emptied ?
(a) 3 min
(b) 5 min
(c) 2 min
(d) Data inadequate
(e) None of these

Q3. A and B can finish a job in 10 days while B and C can do it in 18 days. A started the job, worked for 5 days then B worked for 10 days and the remaining job was finished by C in 15 days. In how many days could C alone have finished the whole job ?
(a) 30
(b) 15
(c) 45
(d) 24
(e) 54

Q4. A is thrice as good a workman as B and therefore is able to finish a job in 30 days less than B. How many days will they take to finish the job working together?
(a) 10 ¼
(b) 11 ¼
(c) 7 ½
(d) 7 ¼
(e) 12 ½

Q5. 9 men working 7 hours a day can complete a piece of work in 15 day. In how many days can 6 men working for 9 hours a day, complete the same piece of work ?
(a) 63/4 days
(b) 16 days
(c) 67/4 days
(d) 35/2 days
(e) 37/2 days

Q6. Two pipes A and B can fill a tank in 24 minutes and 32 minutes respectively. If both the pipes are opened simultaneously, after how much time should B be closed so that the tank is full in 18 minutes ?
(a) 6
(b) 8
(c) 10
(d) 11
(e) 13

Q7. Three pipes A, B and C are connected to a tank. A and B together can fill the tank in 10 hours, B and C together in 15 hours and C and A together in 12 hrs. In how much time will pipe fill the tank together (in hours) ?
(a) 8
(b) 12
(c) 11
(d) 10
(e) 14

Q8. Twenty-four men can complete a work in sixteen days. Thirty-two women can complete the same work in twenty-four days. Sixteen men and sixteen women started working and worked for twelve days. How many more men are to be added to complete the remaining work in 2 days?
(a) 48
(b) 24
(c) 36
(d) 30
(e) 32

Q9. There is a hole in a water tank which can empty it in 8 hours. A pipe is opened which fills 6 litre water per minute in tank and now tank is emptied in 12 hours. What is the capacity of the tank?
(a) 8260 litre
(b) 8660 litre
(c) 8640 litre
(d) 8620 litres
(e) 8460 litres

Q10. Krishna can do a work in 10 days while Mohan can do the same work in 20 days. They started work together. After 3 days Krishna left the work and Mohan completed it. How many days Mohan worked alone more than the number of days required when both work together to complete the work ?
(a) $4\frac{1}{3}$
(b) $3\frac{1}{4}$

(c) $2\frac{3}{5}$

(d) $3\frac{2}{3}$

(e) None of these

Q11. A and B can separately complete a piece of work in 20 days and 30 days respectively. They worked together for some time, then B left the work. If A completed the rest of the work in 10 days, then B worked for
(a) 6 days
(b) 8 days
(c) 12 days
(d) 16 days
(e) 5 days

Q12. The work done by a woman in 8 hours is equal to the work done by a man in 6 hours and by a boy in 12 hours. If working 6 hours per day 9 men can complete a work in 6 days, then in how many days can 12 men, 12 women and 12 boys together finished the same working 8 hours per day?
(a) $2\frac{1}{2}$ days
(b) $1\frac{1}{2}$ days
(c) $3\frac{1}{2}$ days
(d) None of these
(e) $1\frac{2}{3}$ days

Q13. A pipe can fill a cistern in 12 min and another pipe can fill it in 15 min but a third pipe can empty it in 6 minutes. The first two pipes are kept open for 5 minutes in the beginning and then the third pipe is also opened. Time taken to empty the cistern is:
(a) 38 minutes
(b) 22 minutes
(c) 42 minutes
(d) 45 minutes
(e) 60 minutes

Q14. A cistern has two inlet taps (which fill it in 12 minutes and 15 minutes, respectively) and an exhaust tap. When all the three taps are opened together, it takes 20 minutes to fill an empty cistern. How long will the exhaust tap take to empty it?
(a) 20 minutes
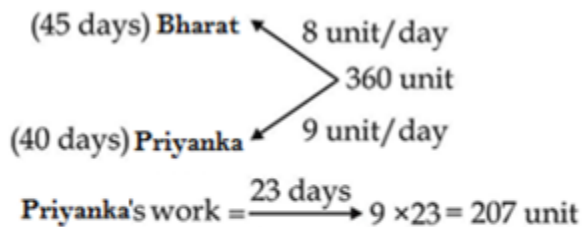(b) 16 minutes
(c) 12 minutes
(d) 10 minutes

(e) 14 minutes

Q15. Two pipes can fill a tank in 15 hours and 20 hours respectively, while the third pipes can empty it in 30 hours. If all the pipes are opened simultaneously, the empty tank will be filled in
(a) 10 hours
(b) 12hours
(c) 15 hours
(d) 15 ½ hours
(e) 17 hours

Solutions

S1. Ans.(c)
Sol.

(45 days) **Bharat** ➘ 8 unit/day
➚ 360 unit
(40 days) **Priyanka** ➚ 9 unit/day

Priyanka's work = $\xrightarrow{23 \text{ days}}$ 9 ×23 = 207 unit

Remaining work = 153

Bharat + Priyanka = 17 unit/day

∴ Required time = $\frac{153}{17}$ = 9 days

S2. Ans.(d)
Sol.
4 minutes work of filling pipes
$= \left(\frac{1}{15} + \frac{1}{10}\right) \times 4$
$= \frac{2}{3}$

Here, we cannot say in how much time the emptying pipe will empty the 2/3 filled tank because there is no information about the filling pipes whether they are get closed or still opened.

S3. Ans.(c)
Sol.
Let A takes x days alone to finish the job & time taken by B to finish the job alone = y days and that by C = z days

$$\therefore \frac{1}{x} + \frac{1}{y} = \frac{1}{10} \quad \dots(i)$$

$$\text{and} \frac{1}{y} + \frac{1}{z} = \frac{1}{18} \dots(ii)$$

$$\text{and} \frac{5}{x} + \frac{10}{y} + \frac{15}{z} = 1 \dots(iii)$$

Solving (i), (ii) and (iii), we get

z = 45 days

S4. Ans.(b)
Sol.
Let A takes x and B takes $3x$ days to finish the work

$\because 3x - x = 30 \Rightarrow x = 15$

B's time to finish the work = 3 × 15 = 45 days

$\therefore$ (A + B)'s 1 days work $= \frac{1}{15} + \frac{1}{45}$

$$= \frac{4}{45}$$

$\therefore$ (A+B) will finish the work in $\frac{45}{4}$ days

i.e. $11\frac{1}{4}$ days.

S5. Ans.(d)
Sol.
Let required days are x

Then

9 × 7 × 15 = 6 × 9 × x

$$\Rightarrow x = \frac{35}{2} \text{ days.}$$

S6. Ans.(b)
Sol.

1 minute work of $(A + B)$ both $= \left(\dfrac{1}{24} + \dfrac{1}{32}\right)$

$= \dfrac{4 + 3}{8 \times 12}$

$= \dfrac{7}{96}$ minutes

i.e. tank will full in $\dfrac{96}{7}$ minutes.

Let B is closed after x minutes

$\therefore$ rest work $= \left(1 - \dfrac{7x}{96}\right)$ done by A

$A \rightarrow 24$ minutes $\rightarrow 1$

$\therefore \left(1 - \dfrac{7x}{96}\right) \rightarrow 24\left(1 - \dfrac{7x}{96}\right)$

$\therefore 24\left(1 - \dfrac{7x}{96}\right) = (18 - x)$

$\Rightarrow 24 - \dfrac{7x}{4} = 18 - x$

$\Rightarrow 6 = \dfrac{3x}{4}$

$\Rightarrow x = 8$ minutes

S7. Ans.(a)
Sol.

$(A + B)'s$ 1 hour work $= \dfrac{1}{10}$

$(B + C)'s$ 1 hour work $= \dfrac{1}{15}$

$(C + A)'s$ 1 hour work $= \dfrac{1}{12}$

$\therefore (A + B + C)'s$ 1hour work

$= \dfrac{1}{2\left[\dfrac{1}{10} + \dfrac{1}{15} + \dfrac{1}{12}\right]} = \dfrac{1}{2}\left[\dfrac{6 + 4 + 5}{60}\right] = \dfrac{1}{8}$

$\therefore (A + B + C)$ can do the required work in 8 hours.

S8. Ans.(b)
Sol.

1 man con complete the work in 16 × 24 = 384 days

1 man per day work = $\frac{1}{384}$

16 men per day work = $\frac{16}{384} = \frac{1}{24}$

16 women per day work = $\frac{16}{32 \times 24} = \frac{1}{48}$

(16 men + 16 women) per day work

= $\frac{1}{24} + \frac{1}{48} = \frac{1}{16}$

Work done in 12 days = $\frac{12}{16}$

Remaining work = $1 - \frac{12}{16} = \frac{1}{4}$

This work should be completed in 2 days

So per day work should be $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$

But right now only $\frac{1}{16}$ work per day is being done.

So $\left(\frac{1}{8} - \frac{1}{16} = \frac{1}{16}\right)$ more work is required for

which $\frac{\frac{1}{16}}{\frac{1}{384}}$ = 24 more man are required.

S9. Ans.(c)
Sol.
Hole can empty the tank in 8 hour
Due to an inlet it takes 12 hours.
LCM of 8 and 12 = 24
Unit work of inlet pipe = 3 unit per hour
So, inlet pipe can full it in $\frac{24}{3-2} = 24\ hour$
Water in tank = 24 × 60 × 6 = 8640 litre

S10. Ans.(a)
Sol.
Let total work = 100
Krishna's efficiency = 10%
Mohan's efficiency = 5%
Work done by Krishna and Mohan together in 3 days
= 15 × 3 = 45%
Now, Number of days in which Mohan completed rest (55%) work alone = 55/5 = 11

Now number of days Krishna and Mohan both worked together $= \frac{100}{15} = 6\frac{2}{3}$

∴Required difference in number of days $= (11) - \left(6\frac{2}{3}\right)$

$= \frac{13}{3} = 4\frac{1}{3}$days

S11. Ans.(a)
Sol.
Let B worked for x days.

$$\therefore \frac{x + 10}{20} + \frac{x}{30} = 1$$

$$\Rightarrow \frac{5x + 30}{60} = 1$$

$$\Rightarrow x = 6 \text{ days}$$

S12. Ans.(b)
Sol.
Ratio of efficiencies of man, women and child

$$= \frac{1}{6} : \frac{1}{8} : \frac{1}{12}$$

$$= 4 : 3 : 2$$

∴ One day one hour work of all of them will be respectively

$$= \frac{1}{36 \times 9}, \frac{3}{4 \times 36 \times 9} \ \& \ \frac{1}{2 \times 36 \times 9}$$

∴ One day work of (12M + 12W + 12B)

$$= \frac{12 \times 8}{36 \times 9} + \frac{12 \times 8 \times 3}{4 \times 36 \times 9} + \frac{12 \times 8}{2 \times 36 \times 9}$$

$$= \frac{2}{3}$$

∴ Required days to complete the work

$$= \frac{3}{2} \text{ days}$$

$$= 1\frac{1}{2} \text{ days}$$

S13. Ans.(d)
Sol.

5 minute work of both filling pipes

$$= \frac{5}{12} + \frac{5}{15} = \frac{3}{4}$$

One minute work of all the three pipes

$$= \frac{1}{12} + \frac{1}{15} - \frac{1}{6} = -\frac{1}{60}$$

Let in x min. the cistern is empty.

$$\therefore \frac{3}{4} + \left(-\frac{1}{60}\right)x = 0$$

$$\Rightarrow \frac{x}{60} = \frac{3}{4}$$

$$\Rightarrow x = 45 \ min.$$

S14. Ans.(d)
Sol.

Let, Tap C can empty the cistern
in x minutes

$$\therefore \frac{1}{12} + \frac{1}{15} - \frac{1}{x} = \frac{1}{20}$$

$$\Rightarrow x = 10 \ min$$

S15. Ans.(b)
Sol.

Total work done in 1 hour by all the three pipes

$$= \frac{1}{15} + \frac{1}{20} - \frac{1}{30}$$

$$= \frac{4 + 3 - 2}{60} = \frac{5}{60} = \frac{1}{12}$$

⇒ In 12 hour's empty tank will be filled if all the
pipes are opened simultaneously.

For any Banking/Insurance exam Assistance, Give a Missed call @ 01141183264