Quiz Date: 17th April 2020

Q1. Aman can finish a piece of work by himself in 42 days. Mohit, who is 1/5 times more efficient as Aman, requires X days to finish the work by working all by himself. What is the value of X?
(a) 28 days
(b) 49 days
(c) 35 days
(d) 42 days
(e) 50 days

Q2. The daily work of 2 men is equal to that of 3 women or that of 4 youngsters. By employing 14 men, 12 women, and 12 youngsters a certain work can be finished in 24 days. If it is required to finish it in 14 days and as an additional labor, only men are available, how many of them will be required?
(a) 18 men
(b) 20 men
(c) 48 men
(d) 28 men
(e) 24 men

Q3. 18 Men can complete a project in 30 days and 16 women can complete the same project in 36 days. 15 men start working and after 9 days they are replaced by 18 women. In how many days will 18 women complete the remaining work?
(a) 20
(b) 30
(c) 26
(d) 28
(e) 24

Q4. Amit and Sujit together can complete an assignment of data entry in 5 days. Sujit's speed is 80% of Amit's speed and the total key are 5,76,000. What is Amit's speed in key depressions per hour if they work for 8 hours a day?
(a) 4800
(b) 6400
(c) 8000
(d) 7200
(e) 8400

Q5. A and B together can complete a piece of work in $10\frac{2}{7}$ days while B and C together can complete the same work in $13\frac{1}{3}$ days. B is 25% more efficient than C. In how many days will A and C together complete the same work?
(a) $11\frac{1}{4}$ days

(b) $12\frac{1}{4}$ days
(c) $11\frac{1}{3}$ days
(d) $12\frac{1}{3}$ days
(e) $14\frac{1}{4}$ days

Q6. A certain number of people were supposed to complete a work in 24 days. The work, however, took 32 days, since 9 people were absent throughout. How many people were supposed to be working originally?
(a) 32
(b) 27
(c) 36
(d) 30
(e) 28

Q7. 8 men can finish a piece of work in 21 days. 14 men started working and after 3 days were replaced by 9 women. These 9 women finished the remaining work in 24 days. In how many days can days can 9 women finish the whole work?
(a) 24
(b) 26
(c) 36
(d) 32
(e) 30

Q8. Two pipes A and B can fill a tank in 20 hours and 25 hours respectively and a third pipe C can empty the tank in 50 hours. All of three pipes opened together and after some time pipe C is closed. If total time to fill the tank is 13 hours, find after how much time pipe C was closed?
(a) 11 hrs
(b) 9 hrs
(c) 8.5 hrs
(d) 7.5 hrs
(e) 10.5 hrs.

Q9. There are 6 filling pipes each capable of filling a cistern alone in 16 minutes and 4 emptying pipes each capable of emptying a cistern alone in 20 minutes. All pipes are opened together and as a result, tank fills 28 litres of water per minute. Find the capacity of the tank.
(a) 145 l
(b) 160 l
(c) 240 l
(d) 180 l
(e) 154 l

Q10. 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

Q11. A tap can fill a tank in 16 minutes and another can empty it in 8 minutes. If the tank is already ½ full and both the taps are opened together, will the tank be filled or emptied? How long will it take before the tank is either filled or emptied completely as the case may be?
(a) Emptied ; 16 min
(b) Filled ; 8 min
(c) Emptied ; 8 min
(d) Filled; 12 min
(e) None of these

Q12. 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

Q13. 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 ?
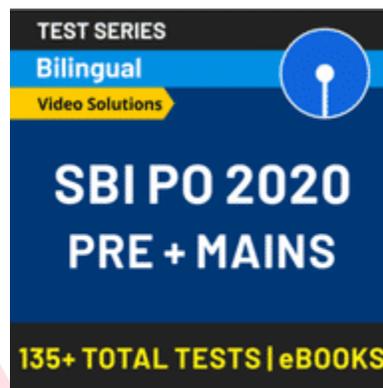(a) 6
(b) 8
(c) 10
(d) 11
(e) 13

Q14. A tank is normally filled in 8 hours but takes 2 hours longer to fill because of a leak in its bottom. If the cistern is full, in how many hrs will the leak empty it ?
(a) 45
(b) 50
(c) 40
(d) 35
(e) 55

Q15. 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

TEST SERIES
Bilingual
Video Solutions

SBI PO 2020
PRE + MAINS

135+ TOTAL TESTS | eBOOKS

Solutions

S1. Ans.(c)
Sol.
Efficiency Mohit : Aman $= 1 + \frac{1}{5} : 1 = 6 : 5$
Given
    $5 \rightarrow 42$ days
$\therefore 6 \rightarrow \frac{42 \times 5}{6} = 35 \; days = x \; days$

S2. Ans.(b)
Sol.
Hence
$2M = 3W = 4Y$
$\therefore (14M + 12W + 12Y) = 14 + 8 + 6 = 28$ Men
Total Unit $= 28 \times 24$
$\therefore 28 \times 24 = x \times 24$
$x = 48$
Total no. of men required for additional labor = 48 – 28 = 20 men

S3. Ans.(e)
Sol.

One minute work of 1 man $= \dfrac{1}{18 \times 30}$

∴ One minute work of 15 men $= \dfrac{15}{18 \times 30}$

$= \dfrac{1}{36}$

and one minute work of 18 women

$= \dfrac{18}{16 \times 36} = \dfrac{1}{32}$

Let required time is x days

∴ $\dfrac{9}{36} + \dfrac{x}{32} = 1$

⇒ x = 24 days

S4. Ans.(c)
Sol.
Let Amit's speed = x depressions per hr.
∴ Sujit's speed = 0.8x depressions per hr.
ATQ,
(x + 0.8x) × 8 × 5 = 5,76,000
⇒ x = 8000 depressions per hour

S5. Ans.(a)
Sol.
One day work of A and B together

$= \dfrac{7}{72}$

i. e. $\dfrac{1}{A} + \dfrac{1}{B} = \dfrac{7}{72}$ ... (i)

and one day work of B and C together

$= \dfrac{3}{40}$

i. e. $\dfrac{1}{B} + \dfrac{1}{C} = \dfrac{3}{40}$ ... (ii)

But time taken by C = 1.25 × time taken by B

i. e. $\dfrac{1}{B} + \dfrac{1}{C} = \dfrac{1.25}{C} + \dfrac{1}{C}$

$= \dfrac{2.25}{C}$ ... (iii)

Solving eq. (i), (ii) and (iii) we get,
Time taken by A to complete the whole work alone = 18 days
and that by B = 24 days
and by C = 30 days

∴ Required answer = $\dfrac{18 \times 30}{48}$

$= 11\dfrac{1}{4}$ days

S6. Ans.(c)
Sol.
Let x people were supposed to work
∴ (x – 9) × 32 = x × 24
⇒ 8x = 9 × 32
⇒ x = 36

S7. Ans.(d)
Sol.
One day work of 14 men = $\dfrac{14}{8 \times 21}$
Remaining work after 3 days = $1 - \dfrac{14 \times 3}{8 \times 21}$
$= \dfrac{3}{4}$
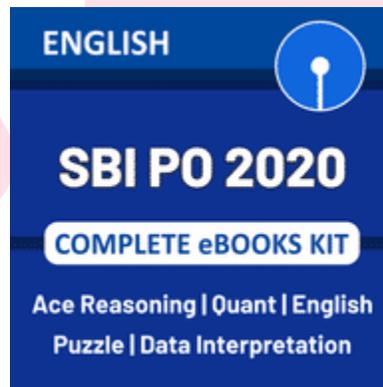∵ 3/4 work is done by 9 women in 24 days
∴ complete work will be done by 9 women in
$= \dfrac{24 \times 4}{3}$
= 32 days

S8. Ans.(c)
Sol.
Let after x hours pipe c was closed
One hour work of all the three pipes together
$= \dfrac{1}{20} + \dfrac{1}{25} - \dfrac{1}{50}$
$= \dfrac{7}{100}$
One hour work of A and B together
$= \dfrac{1}{20} + \dfrac{1}{25} = \dfrac{9}{100}$
ATQ,

$$\frac{7x}{100} + \frac{9}{100}(13 - x) = 1$$
$$\Rightarrow -\frac{2x}{100} = 1 - \frac{117}{100}$$
$$\Rightarrow x = 8.5 \text{ hours}$$

S9. Ans.(b)
Sol.
Cistern filled in one min
$$= \frac{6}{16} - \frac{4}{20} = \frac{7}{40}$$
Cistern filled in $= \frac{40}{7}$ min
Cistern capacity $= \frac{40}{7} \times 28 = 160$ litres

S10. 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 $\frac{2}{3}$ filled tank because there is no information about the filling pipes whether they are get closed or still opened.

S11. Ans.(c)
Sol.
Let both the taps work for 8 min
∴ Quantity of liquid in tank after 8 min
$$= \frac{1}{2} + \left(\frac{8}{16} - \frac{8}{8}\right)$$
$$= 0$$
i.e. tank is emptied in 8 min.

S12. 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
$$\therefore \frac{1}{x} + \frac{1}{y} = \frac{1}{10} \quad \text{... (i)}$$
$$\text{and } \frac{1}{y} + \frac{1}{z} = \frac{1}{18} \text{ ... (ii)}$$
$$\text{and } \frac{5}{x} + \frac{10}{y} + \frac{15}{z} = 1 \text{ ... (iii)}$$
Solving (i), (ii) and (iii), we get

z = 45 days

S13. 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

S14. Ans.(c)
Sol.

Required time to empty the tank $= \dfrac{1}{8} - \dfrac{1}{10} = \dfrac{5 - 4}{40} = \dfrac{1}{40}$

i.e. 40 hours will be required.

S15. 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.

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