Bipin Nambiar
(SBI PO 2018)

Shiraz Khan
(SBI Clerk 2018)

Kuldeep Yadav
(SBI PO 2018)

Rajat Saxena
(IBPS Clerk 2018)

Anupam Tyagi
(IBPS PO 2018)

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The Question Bank

Time and Work Questions for SBI Clerk Mains, IBPS Clerk Mains, RBI Assistant Mains, LIC AAO, SBI PO Pre, IBPS PO Pre and RRB Scale I Pre Exams.

Time n Work Quiz 15

Directions: Read the following questions carefully and choose the right answer.

1. **3 workers Peroola, Rahul and Prashant can complete a piece of work in 6 days. Peroola takes 15 days less than Rahul to complete the same work. Find in how many days will Prashant complete the whole work alone with 75% of his original efficiency, if Rahul can complete the work alone in 35 days?**

A. $\frac{560}{37}$ days   B. $\frac{499}{36}$ days   C. $\frac{361}{17}$ days   D. $\frac{555}{43}$ days   E. None of these

2. **Three persons A , B, and C complete a piece of work in 6 days for which they are paid a sum of Rs. 480.If the efficiency of A, B and C are in ratio 4 : 5 :7, then find the daily income of B?**

A. Rs. 25   B. Rs. 30   C. Rs. 150   D. Rs. 20   E. None of these

3. **Rashmi and Pallavi can make a carpet in 3 days and 12 days more than the time taken if both of them worked together. Find the time in which Rashmi can make the carpet alone.**

A. 9 days   B. 6 days   C. 12 days   D. 8 days   E. None of these

4. **Three workers Trump, Putin and Jinping are appointed to do a job. They together started the job but Jinping left after 3 days when 37% of the job was done. The remaining job was completed by Trump and Putin in 7 days. The ratio of efficiency of Trump and Putin is 4 : 5. Find the number of days required by the slowest worker to complete the entire job alone?**

A. 22 days   B. 20 days   C. 24 days   D. 18 days   E. 30 days

5. **A group of men decided to do a job in 4 days, but 20 men dropped out everyday. Find the number of men who initially decided to do the job, if job was completed in 7 days?**

A. 70   B. 110   C. 140   D. 120   E. None of these

6. **Two male workers A and B can complete a piece of work in 20 and 35 hours respectively. A female worker, C can complete the whole work alone in H hours with**

three - fourth of her original efficiency. If all the three working together with their usual efficiency can complete the whole work in 6 hours, then find the value of H.

A. $\frac{460}{37}$ days   B. $\frac{560}{27}$ days   C. $\frac{460}{17}$ days   D. $\frac{560}{37}$ days   E. None of these

7. **Raj can do a piece of work in 20 days and Rohan can do it in 12 days. On which date will they complete the work, if they work together on prime number dates starting on 29th April?**

A. 7th May   B. 17th May   C. 13th May   D. 23rd May   E. None of these

8. **To do a certain task Bhuvan would take 3 times as long as Abir and Varun together; and Varun would takes 4 times as long as Abir and Bhuvan together. Three of them together can complete the task in 5 days. How much time is taken by Bhuvan and varun to complete the task?**

A. $14\frac{1}{2}$ days   B. $13\frac{1}{3}$ days   C. 12 days   D. $11\frac{1}{9}$ days   E. $10\frac{1}{3}$ days

9. **If 5 men and 5 women work together then they can finish a work in 5 days but if 5 women work alone then they take 40/3 more days than the time required by 5 men. Find efficiency of one woman is how much percentage less than one man?**

A. 60%   B. 66.66%   C. 40%   D. 62.5%   E. None of these

10. **A can do 3/5th of work in 15 days. Efficiency of B is 25% more than that of A. Both A and B started working together and left the work after five days. C completed the remaining work in 11 days. Efficiency of C is what percent more/less than that of A ?**

A. 20% less   B. 25% more   C. 20% more   D. 25% less   E. 33.33% more

Correct Answers:

1	2	3	4	5	6	7	8	9	10

A	A	A	E	C	D	B	D	B	B

Explanations:

1. Peroola + Rahul + Prashant = 6
Rahul = 35
Peroola = (35 − 15) = 20
Total units of work = 420
(Peroola + Rahul + Prashant)'s one day work = 70 units
Peroola's one day work = 21 units
⇒ Rahul = 12 units
Prashant's one day work = 70 − 33 = 37 units

Prashant's efficiency to do the work alone = $\dfrac{75}{100} \times 37$

Time required to complete the work = $\dfrac{420 \times 4}{37 \times 3} = \dfrac{560}{37}$ days

Hence, option A is correct.

2. Total amount earned by A ,B, and C in 6 days =Rs 480

The amount earned by them in 1 day = $\dfrac{480}{6}$ = Rs 80

Amount of money earned is proportional to the amount of work done
Let work done by A ,B and C be 4x, 5x and 7x.
∴ Total work done by A,B and C together= 16x
Work done by B = 5x

Daily income of B = $\dfrac{5x}{16x} \times 80$ = Rs. 25

Hence, option A is correct.

3. Let the time both of them together will take to make the carpet be x days
Time taken by Rashmi alone = x + 3 days
Time taken by Pallavi alone = x + 12 days
One day work when they both work together = Sum of their individual per day work

$\dfrac{1}{X} = \dfrac{1}{x+12} + \dfrac{1}{x+3}$

$\dfrac{1}{x} = \dfrac{2x+15}{x^2 + 15x + 36}$

$x^2 + 15x + 36 = 2x^2 + 15x$
x = 6
Time taken by Rashmi to make carpet alone = 6 + 3 = 9 days
Hence, option A is correct.

4. Let x, y and z are the one day's work of Trump, Putin and Jinping respectively.

According to the question,

$\Rightarrow 3 \times (x + y + z) = 37\%$ of the work

$\Rightarrow 7 \times (x + y) = 63\%$

$\Rightarrow x + y = 9\%$

∵ The ratio of efficiency of Trump and Putin is 4 : 5,

∴ $5x = 4y$ and $x = 4\%$, $y = 5\%$ work per day.

It implies Trump can complete the job and in 25 days and Putin in 20 days.

In 3 days (x + y + z) do 37% of the work

Out of this Trump and Putin would do 27% work = (3 × 9%) of the work.

Remaining work = 37% – 27% = 10% (done by Jinping in 3 days)

∴ The work of $z = \dfrac{10}{3}$ = 3.33% work per day

∴ Jinping is the slowest and he would do the work in 30 days.

Hence, option E is correct.

5. Let the initial number of men be m

Total work = 4 m

m + (m – 20) + (m – 40) + …… = 4 m

$\dfrac{7}{2}$ [2m + 6 (–20)] = 4m

$\dfrac{7}{2}$ (2m – 120) = 4m

m =140

Hence, option C is correct.

6. Total units of work = 420

(A + B + C)'s one hour's work = 70 units

A's one hour's work = 21 units

⇒ B = 12 units

C's one hour's work = 70 − 33 = 37 units

C's efficiency to do the work alone = $3 \times \dfrac{37}{4}$

∴ Time reqd. to complete the work = $420 \times \dfrac{4}{37 \times 3}$ = $\dfrac{560}{37}$ hours

Hence, option D is correct.

7. Total work = 60 {LCM of 20, 12}

A/day = 3; B/day = 5; together = 8/ days = No. of days = 7.5 days

8th prime number date starting from 29th April
29th April, 2nd May, 3rd May, 5th May, 7th May, 11th May, 13th May, 17th May
Hence, option B is correct.

8. Let us represent efficiency of Abir, Bhuvan and Varun by A, B and V respectively.

According to the question,
$\dfrac{B}{A + V} = \dfrac{1}{3}$ ....(1)

$\dfrac{V}{A + B} = \dfrac{1}{4}$ ....(2)

To equate the ratio in the above equations, let us multiply (1) by 5 and (2) by 4.
So, A : B : V = 11 : 5 : 4
11 + 5 + 4 = 20 units
In 5 days, task completed = 20 × 5 = 100 units (total task)
Time taken by Bhuvan and Varun to complete the task
$= \dfrac{100}{4 + 5} = 11\dfrac{1}{9}$ days

Hence, option D is correct.

9. Let the days taken by 5W = x and 5M = y.

One day work of 5W = $\dfrac{1}{x}$ and that of 5M = $\dfrac{1}{y}$

$\dfrac{1}{x} + \dfrac{1}{y} = \dfrac{1}{5}$

5 (x + y) = xy --------(1)

$x = \dfrac{40}{3} + y$

3 (x − y) = 40 -------(2)

Multiplying eq 1 and 2

3 (x² − y²) = 8xy

Dividing by y²

$\dfrac{3x^2}{y^2} - \dfrac{8x}{y} - 3 = 0$

Let $\dfrac{x}{y} = t$

3t² − 8t − 3 =0

t = 3

$\dfrac{x}{y} = \dfrac{3}{1}$

So ratio of efficiency of W : M = 1 : 3
Efficiency of Women = 66.67% less than that of Men
Hence, option B is correct.

10. A does 3/5th of work in 15 days.

Time Taken by A to complete the work
$= \dfrac{5}{3} \times 15 = 25$ days

Efficiency of B is 25% more than that of A.

If Work done by A in one day = 4, then work done by B in one day = 5

Ratio of time taken by A and B = 5 : 4

Time taken by B to complete the work
$= \dfrac{4}{5} \times 25 = 20$ days

A and B worked for five days.

Total work Completed by A and B in 5 days
$= 5 \left(\dfrac{1}{25} + \dfrac{1}{20} \right)$

$= \dfrac{1}{5} + \dfrac{1}{4} = \dfrac{9}{20}$

Work Left $= \dfrac{11}{20}$ which is done by C in 11 days.

Time taken by C to complete the whole work $= \dfrac{20}{11} \times 11$

C = 20 days

Ratio of Efficiency of A and C $= \dfrac{20}{25}$

Efficiency of C is 25 % more than that of A.
Hence, option B is correct.