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Time and Work Questions for IBPS RRB SCALE- I Pre & RRB Office Asst. Pre Exams – Time and Work Quiz at Smartkeeda.

Time and Work Quiz 16

Directions: Kindly study the following Questions carefully and choose the right answer:

1. A and C alone can complete a work in 4 days and 6 days respectively while B alone can destroy it in 3 days. If A, C and B work alone in that order, then in how many days the work will be competed?

A. 36 B. 21 C. 23 D. 27.5 E. 22

2. Mohan can complete a work in 15 days and Sonal is 25% less efficient than Mohan and Sajal can complete the same work in 24 days. Sonal starts the work alone and next day Mohan and Sajal joined her and then all three continued the work till the end. In how many days the whole work was completed?

A. 8 days B. 5 days C. 6 days D. 7 days E. None of these

3. 4 men can finish a given work in 12 days while 6 women can finish the same work in 14 days. If each men and women in their respective groups are equally efficient, find the ratio of number of days required for finishing the work by 1 man and 1 woman.

A. 9 : 7 B. 7 : 9 C. 6 : 7 D. 4 : 7 E. 2 : 3

4. Ram can do a piece of work in 24 days. His brother Shyam can do the same work in 33.33% more days. If they do the same work alternatively starting from Shyam, what part of work will remain to be done after 7 days?

A. 1/4 B.3/4 C.2/3 D.1/3 E.1/2

5. In a family, husband and wife can together clean their house in 20 hours. If they are joined by their two kids, the cleaning can be finished in 14 hours. How many hours one kid will need to finish the cleaning if both the kids are equally efficient?

A. 72 B. $77\frac{2}{3}$ C. $83\frac{1}{3}$ D. $92\frac{2}{3}$ E. $93\frac{1}{3}$

6. Charitarth can do a piece of work in 24 days while Siddharth can do the same piece of work in 'X' days, if they both started working together, they can complete the work in (X - 4) days, find the value of X?

A. 10 B. 15 C. 12 D. 8 E. 16

7. A construction company uses 40 labourers for constructing a road which is 1.6 km long. The labourers complete the construction of the road in 4 days. In how many days 30 labourers from the same group can construct a road 2.4 km long? (Each labourer is identically efficient)

A. 4 days B. 6 days C. 8 days D. 10 days E. 12 days

8. Vikash completes a work alone in 25 days and Vinay completes the same work in 15 days. They worked alternately for 18 days, with Vikash starting the work and then Vinay left the work. The remaining work is completed by Vikash alone. What is the number of days taken to complete the whole work?

A. 22 days B. 21 days C. 20 days D. 19 days E. None of these

9. Ram alone can do work-Y in 36 days. If Ram works together with Shyam, thrice the work-Y is finished in 43.2 days. Find in how many less days than Ram, Shyam can finish the work-Y alone.

A. 12 B. 8 C. 4 D. 16 E. 24

10. Nandita and Vinita alone can do a work in 12 days and 40 days respectively. They started working together and after 4 days Vinita increased her efficiency 33.33% and Anita also joins the work. If total work has been completed in 8 days then in how many days will Anita alone complete the work?

A. 50 days B. 40 days C. 36 days D. 25 days E. 42 days

Correct Answers:

1	2	3	4	5	6	7	8	9	10
C	D	D	B	E	C	C	D	A	B

Explanations:

1. Let the total work = LCM (4, 6, 3) = 12k

Efficiency of A = $\frac{12k}{4}$ = 3k, B = $\frac{12k}{3}$ = 4k

and C = $\frac{12k}{6}$ = 2k

Work done on first three days = 3k + 2k – 4k = k

3 days work = k

21 days of work = 7k

22nd day (A will work) = 7k + 3k

23rd day (C will work) = 10k + 2k = 12k

So, work will be competed in 23 days

Hence, option C is correct.

For video solution :

https://www.youtube.com/watch?v=-K9g1VMlr5U

2. The time taken by Sonal to complete the work

= (15/75) × 100 = 20 days

Let the total amount of the work = 120 units

The work done by Mohan in one day = 120/15 = 8 units

The work done by Sonal in one day = 120/20 = 6 units

The work done by Sajal in one day = 120/24 = 5 units

According to the question,

The time taken by Mohan, Sonal and Sajal to complete the remaining work

= (120 – 6)/19 = 114/19 = 6 days

Total time = 6 + 1 = 7 days

Hence, option D is correct.

3. 4 men finish the work in 12 days, so

1 man can finish in 12 × 4 = 48 days

6 women finish the work in 14 days, so

1 woman can finish in 14 × 6 = 84 days

Ratio = 48 : 84 = 4 : 7

Hence, option D is correct.

4. Shyam needs 33.33% of 24 + 24 = 32 days.

When they do alternatively for 7 days starting from Shyam, we have

$$\frac{1}{32} + \frac{1}{24} + \frac{1}{32} + \frac{1}{24} + \frac{1}{32} + \frac{1}{24} + \frac{1}{32}$$

$$\frac{4}{32} + \frac{3}{24}$$

$$\frac{1}{8} + \frac{1}{8}$$

1/4

Therefore, they will finish 1/4 part of work in 7 days. Remaining work

= 1 – 1/4 = 3/4

Hence, option B is correct.

5.

When husband and wife together clean, they need 20 hours, means they clean 1/20 part of the house in 1 hour

.

Now, let the two kids together can clean in K hours, then in 1 hour the kids clean 1/K part of the house, then

1/20 + 1/k = 1/14

1/K = 3/140

K = 140/3

Since, both the kids are equally efficient, the number of hours needed to clean the house by only one kid will be double to that when they clean together.

Therefore, time required = (2 × 140) / 3

= 280/3 = $93\frac{1}{3}$ hours

Hence, option E is correct.

6. Charitarth's one day work = 1/24

Siddharth's one day work = 1/X

Charitarth and Siddharth's one day work = 1/(X – 4)

According to the question,

1/24 + 1/X =1/(X – 4)

(24 + X)/24X = 1/(X – 4)

24X – 96 + X2 – 4X = 24X

X2 – 4X – 96 = 0

X2 – 12X + 8X – 96 = 0

X(X – 12) + 8(X – 12) = 0

(X – 12)(X + 8) = 0

X = 12, – 8

Neglecting negative value, we get, X = 12

Hence, option C is correct.

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7.

40 labourers ----------→ 4 days

10 labourers ----------→ 4 × 4 days

30 labourers ----------→ (4 × 4)/3 days

So, 30 labourers can finish the same work in 16/3 days.

Now, if work is increased

(2.4 – 1.6)/1.6 × 100 = 50%,

so time will also be increased by 50%

Number of days = (1.5 × 16)/3 = 8 days

Hence, option C is correct.

8. Total work = L.C.M of 25 and 15 = 75 units

Efficiency of Vikash = 75/25 = 3 units/day

Efficiency of Vinay = 75/15 = 5 units/day

Work completed in two days = (3 + 5) = 8 units

Work completed in 18 days = (8 × 18)/2 = 72 units

Remaining work = 75 – 72 = 3 units

Days taken by Vikash to complete the remaining work

=3/3 = 1 day

Total days taken to complete the work = 18 + 1 = 19 days

Hence, option D is correct.

9.

Let Shyam can do work-Y in 'q' days, then they can together finish it in

= 36q/(36+q) days

Thrice the work will take thrice the number of days, so

3 × 36q/(36+q) = 43.2

We get, q = 24

So, Shyam needs 36 – 24 = 12 less number of days than Ram.

Hence, option A is correct.

10.

Let total work = LCM of 12 and 40 = 120 units

Units of work done by Nandita in one day

$= \frac{120}{12} = 10$ units

Units of work done by Vinita in one day

$= \frac{120}{40} = 3$ units

Total units of work done by Nandita and Vinita in 4 days = 13 × 4 = 52 units

After 4 days Vinita increased his efficiency by 33.33%.

Units of work done by Vinita per day after 4 days = 3 + 3 × 33.33% = 4 units

Let units of work done by Anita in one day is x units

Therefore $\frac{68}{(10 + 4 + x)} = 4$

68 = 56 + 4x

4x = 12

x = 3

So time taken by Anita alone to complete the work

$= \frac{120}{3} = 40$ days

Hence, option B is correct.