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Time and Work Questions PDF with detailed Solutions

Time and Work questions are a very common type of questions asked in almost every competitive exam. These questions carry a weightage of 2-3 questions (4-6 marks) in SSC exams and 1-2 questions in bank exams. To get a good rank in competitive exams, you should have a good hold on the concepts of Time, Work and Efficiency.

Here are some tips for solving Time and Work questions: Use LCM method to determine work, read carefully what is asked in the question, try making calculations easy by avoiding using fractions, Use shortcuts and formulas.

So, we have attached 10 questions of Time and Work for you to practice with. You should aim to solve these questions in less than half a minute for each.

Practice Questions on Time and Work

You can also download the Time and Work questions and answers pdf. Just click on the **Download PDF** button. So let's start with the very first question.

Q:1 Ram and Shyam were assigned a task to complete in 20 days. Normally, Ram has double efficiency than Shyam. However, Ram deliberately worked at 70% of his efficiency so that Shyam needs to work more to match the deadline. With this added efficiency, in how much time Shyam would have been able to complete the task alone?

1. 34.2 days

2. 40.5 days

3. 42.5 days

4. 37.5 days

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) This was a test of your concepts!

Q:2 A and B together can do a piece of work in 40 days. The ratio of the efficiency of A and B together to the efficiency of C is 3 : 4. Find the number of days taken by them to complete that work together.

1. 120/7 days

2. 120 days

3. 30 days

4. 43/7 days

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Try using short tricks, they will save your time

Q:3 8 women working 10 hours a day can make food to feed 400 men for 12 days. If 550 men are to be fed for 9 days, then 15 women need to work for how many hours?

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1. 6.3

2. 6.5

3. 5.5

4. 4.8

(**Difficulty:** 2, **Estimated Time:** 10 Seconds) This was an easy one! Did you get it right?

Q:4 A can finish a task in x days while B can complete the same task in (x + 5) days. If they are working together, they can finish the same task in 6 days. The value of x is?

1. 10

2. 15

3. 12

4. 8

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) A basic one! These type of questions are very common

Q:5 A is 20% more efficient than B and B is twice as efficient as C. C completes a piece of work in 250 days. If A and B start together to do some work and after 20 days, A leaves and C joins B and finishes the remaining work. If the total wages are Rs 45000 then, find the amount of the wages of A and also find after how many days work will be finished.

1. Rs 9680 and 85 Days

2. Rs 4690 and 49 Days

3. Rs 8640 and 74 Days

4. Rs 5645 and 54 Days

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) We're halfway through. Have you got all your questions correct so far?

Q:6 A tank is joined with 3 different pipes, where 2 pipes A and B can fill the tank in 72 minutes and 96 minutes respectively. The third pipe C can empty the full tank in 144 minutes. All three pipes are kept open for 10 minutes. Then pipes C and B are closed for 5 minutes. After 5 minutes, again Pipe C is opened. How long much time is now required to fill the remaining part of the tank?

1. 54 minutes

2. 1 hours 10 min

3. 1 hours 14 min

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4. 1 hours 49 min

(**Difficulty:** 4, **Estimated Time:** 30 Seconds) This was a hard nut to crack, be prepared for such questions in exam!

Q:7 In completing a work, the efficiencies of men, women and boys are in the ratio 4 : 3 : 2. If 3 men can complete the work in 5 days, then what is the time taken by 2 women and 3 boys to complete the work? (in days)

1. 4

2. 5

3. 8

4. 10

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Be ready for such questions in your exams!

Q:8 A can do one-third of the work in 4 days, and B can complete 25% of the work in 4 days. C can complete the work in 12 days. B and C work together for 4 days and leaves the remaining part to A. How many days will A take to complete the work?

1. 3

2. 4

3. 5

4. 6

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) This was an interesting question!

Q:9 A and B fill a tank in 12 minutes and 16 minutes respectively and pipe C can fill it in 8 minutes. A and B start filling the tank and after 5 minutes C starts filling the tank. In how much time will the tank be filled?

1. 5 minutes

2. 4 minutes

3. 6 minutes

4. 8 minutes

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) If you have a good understanding, you might have wrapped it up in 10 seconds!

Q:10 A and B can paint a wall in 58 minutes and 87 minutes respectively. If they start working together and after 30 minutes they stop working then, find the remaining work.

3

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1. 4/75

2. 4/29

3. 1/29

4. 2/87

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) This was an easy one. Did you guess them all correctly?

Answer Key

Let's check out your score in this test.

1. (4)	2. (1)	3. (3)	4. (1)	5. (3)
6. (4)	7. (2)	8. (3)	9. (3)	10. (2)

Comment below your score, considering each question has 1 mark only. If you scored 8 to 10, congratulations! You are one step closer to selection. If you have scored 5 to 8 marks, then you are doing well, keep it up. If you have scored less than 5 marks then you need to work a little harder on this subject. But don't worry, we are here to help you master the subject.

Let's check the answers and solutions and try to find out what went wrong.

Answers and Solutions

Q:1 The correct answer is **option 4** i.e. **37.5 days**

Let the total work be 100 units.

Given, the work is supposed to be completed in 20 days by Ram and Shyam.

So, combinedly Ram and Shyam does 100/20 = 5 unit work per day.

Let, Normally Shyam does x unit of work per day.

then, Ram does 2x unit of work per day.

Now, x + 2x = 5

or, x = 5/3 unit per day

So, Ram should ideally be working 10/3 units per day.

But, he is working at 70% efficiency i.e. 0.7 x 10/3 = 7/3 units day

Hence, Shyam has to complete = 5 - 7/3 = 8/3 units per day

Now, at this speed, Shyam can complete the work alone in:

⇒ 100/(8/3) days

⇒ 300/8 days = 37.5 days

Q:2 The correct answer is **option 1** i.e. **120/7 days**

Total work = Efficiency × time

If a person can do a piece of work in 'x' days and then another person can do the same work in 'y' days then they together can complete it in (xy)/(x + y) days

Let the efficiency of A and B together is 3x and that of C is 4x.

So, the total work = 3x × 40 = 120x

The time taken by to complete the same work by C

= total work/his efficiency = 120x/4x = 30 days

The time taken By A, B and C to complete the work

= (30 × 40)/(30 + 40) = 1200/70 = 120/7 days

Q:3 The correct answer is **Option 3** i.e. **5.5.**

Work initially = (400 × 12) = 4800 units

Work later = (550 × 9) = 4950 units

If 8 women work 10 hours a day

80 work hours = 4800 units

1 hour work = 4800/80 = 60 units

⇒ 15 women × x hours × 60 units = 4950 units

⇒ x = 5.5 hours

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Q:4 The correct answer is **Option 1** i.e. **10.**

A's one day work = 1/x

B's one day work = 1/(x + 5)

One day work while working together = 1/6 = (1/x + 1/(x + 5))

⇒ 1/6 = 1/x + 1/(x + 5)

⇒ (2x + 5) × 6 = x (x + 5)

⇒ (12x + 30) = (x^2 + 5x)

⇒ x^2 - 7x - 30 = 0

⇒ (x - 10) (x + 3) = 0

⇒ x = 10, -3

A negative value is discarded

Hence, x = 10

Q:5 The correct answer is **option 3** i.e. **Rs 8640 and 74 Days.**

Let, Efficiency of C = 10

Then, Efficiency of B = 2 × (Efficiency of C) = 20

And, Efficiency of A = Efficiency of B + 20% of Efficiency of B

⇒ 20 + (20/100)20 = 20 + 4 = 24

Total work = 250 × Efficiency of C = (250 × 10) = 2500 units

A/q-

(A + B) work together for 20 days

Work completed = Days × Efficiency of (A + B)

⇒ 20 × (24 + 20) = (20 × 44) = 880 units

Reaming work = (2500 - 880) = 1620 units

Remaing work done by (B + C):

6

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Days/time = Reaming work/ Efficiency of (B + C)

⇒ 1620/(20 + 10) = 1620/30 = 54 days

Hence, total work finished in = (20 + 54) days = 74 days

Amount of the wages of A = (Total wages/Total work) × (number of days working by A × Efficiency of A)

⇒ (45000/2500) × (20 × 24) = 18 × 480 = Rs 8640

Q:6 The correct answer is **option 4** i.e. **1 hour 49 min.**

A = 72 minutes

B = 96 minutes

C = 144 minutes

Total capacity of tank = LCM of 72, 96 and 144 = 288 units

Efficiency of A = 288/72 = 4

Efficiency of B = 288/96 = 3

Efficiency of C = 288/144 = 2

Part of tank filled by (A + B + C) together for 10 minutes = 10 × (4 + 3 - 2) = 10 × 5 = 50 units

Now,

B and C stop working for 5 minutes

A work for 5 min = 5 × 4 = 20 liters

Remaining amount = 288 - (50 + 20) = 288 - 70 = 218 liters

Now, C joins A for the remaining work

Time = 218/(4 - 2) = 218/2 = 109 min = 1 hour 49 minutes

Q:7 The correct answer is **option 2** i.e. **5**

3 men can complete the work in 5 days

∴ 1 man can complete the work in 15 days

Ratio of efficiencies $\propto$ 1/Time taken

Time taken by woman = Time taken by man × Efficiency of man/Efficiency of woman

$\Rightarrow$ 15 × 4/3 = 20 days

Time taken by boys = 15 × 4/2 = 30 days

Time taken by 2 women and 3 boys = (2/Time taken by 1 woman + 3/Time taken by 1 boy)$^{-1}$

$\Rightarrow$ (2/20 + 3/30)$^{-1}$ = 5 days

Q:8 The correct answer is **Option 3** i.e. **5**.

Let the amount of time taken by A to complete the remaining work be x days

A can do one-third work in 4 days

Amount of work done by A in x days = 1/3 × ¼ × x = x/12

B can complete 25% of work in 4 days

Amount of work done by B in 4 days = 1/4 (25%)

Amount of work done by C in 4 days = 4/12 = 1/3

Total work = 1/3 + 1/4 + x/12

$\Rightarrow$ 1 = (4 + 3 + x)/12

$\Rightarrow$ 12 = 7 + x

$\Rightarrow$ x = 5 days

Q:9 The correct answer is **Option 3** i.e. **6 minutes.**

If a pipe takes x minutes to fill the tank, then the efficiency of the pipe to fill the tank in 1 minute is 1/x

The efficiency of pipe A to fill the tank in 1 minute = 1/12

The efficiency of pipe B to fill the tank in 1 minute = 1/16

The efficiency of pipe C to fill the tank in 1 minute = 1/8

Pipe A and B together fill the tank in 5 minutes = 5(1/12 + 1/16) = 5(7/48) = 35/48

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The remaining part of the tank is (1 - 35/48) = 13/48

The part of the tank will be filled in 1 minute by all the pipes = (1/12 + 1/16 + 1/8) = 13/48

So, time taken to fill the tank = (5 + 1) = 6 minutes

Q:10 The correct answer is **Option 2** i.e. **4/29.**

If a person can complete a work in x hours then, his efficiency to do the work in 1 hour = 1/x

The efficiency of A to paint the wall in 1 minute = 1/58

The efficiency of B to paint the wall in 1 minute = 1/87

(1/58 + 1/87) the part will be painted by A and B in 1 minute

i.e. (3 + 2)/174 parts = 5/174 parts

In 30 minutes, the parts of the wall that is painted by A and B = 150/174

The remaining part of the wall = 1 - 150/174 = 24/174 = 4/29

So, this is it for today. We will meet again with another new topic. Till then, you can practice the questions again by downloading the PDF of Time and Work.