



## **Time and Work Questions for SSC CGL PDF**

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## Instructions

For the following questions answer them individually

### Question 1

**A and B can do piece of work in 4 days and C and D in 3 days. In how many days will A, B, C and do it together?**

**A**  $\frac{12}{7}$  days

**B**  $\frac{7}{12}$  days

**C**  $\frac{2}{3}$  days

**D**  $\frac{3}{2}$  days

**Answer: A**

#### Explanation:

Time taken for both 'A' and 'B' to do the work is 4 days

$$\text{i.e. } (1/a) + (1/b) = 1/4$$

Time taken for both 'C' and 'D' to do the same work is 3 days.

$$(1/c) + (1/d) = 1/3$$

For all of them to complete the work by working together let it take 'x' days

$$(1/x) = (1/a) + (1/b) + (1/c) + (1/d)$$

$$(1/x) = (1/4) + (1/3)$$

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

$$(1/x) = 7/12$$

$$x = 12/7 \text{ days}$$

### Question 2

**A alone can complete a work in 10 days and B alone can complete the same work in 20 days. In how many days both A and B together can complete half of the total work?**

**A**  $\frac{40}{3}$  days

**B**  $\frac{20}{3}$  days

**C**  $\frac{10}{3}$  days

**D**  $\frac{25}{3}$  days

**Answer: C**

#### Explanation:

Let the total work be 20 units (LCM of 10 and 20)

Efficiency of A =  $20/10 = 2$  units per day

Efficiency of B =  $20/20 = 1$  unit per day

Total efficiency of A and B = 3 units per day

Half of the work =  $20/2 = 10$  units.

Hence, 10 units can be completed by A and B together in  $\frac{10}{3}$  days.

### Question 3

**P and Q together can complete a work in 20 days. If P alone can complete the same work in 36 days, then in how many days Q alone can complete the same work?**

**A** 48 days

- B 42 days
- C 45 days
- D 51 days

**Answer:** C

**Explanation:**

Let the total work be 180 units (LCM of 20 and 36)  
 Efficiency of P+Q =  $180/20 = 9$  units per day  
 Efficiency of P =  $180/36 = 5$  units per day  
 Then, Efficiency of Q =  $9-5 = 4$  units per day  
 Therefore, Q can do the work together in  $180/4 = 45$  days

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**Question 4**

**Pipe C can fill a tank in 12 hours and pipe D can fill the same tank in 40 hours. In how many hours both pipe C and D together can fill the same tank?**

- A  $\frac{60}{7}$  hours
- B  $\frac{60}{11}$  hours
- C  $\frac{120}{13}$  hours
- D  $\frac{120}{11}$  hours

**Answer:** C

**Explanation:**

Let the total capacity of the tank be 120 units (LCM of 12 and 40)  
 Efficiency of Pipe C =  $120/12 = 10$  units per hour  
 Efficiency of Pipe D =  $120/40 = 3$  units per hour  
 Total efficiency of Pipe C and D together =  $13$  units per hour

Therefore, 120 units of tank can be filled in  $\frac{120}{13}$  hours

**Question 5**

**M can complete a work in 14 days less than the time taken by L. If both M and L together can complete the same work in 24 days, then in how many days L alone can complete the same work?**

- A 35 days
- B 56 days
- C 21 days
- D 42 days

**Answer:** B

**Explanation:**

Let the number of days taken by L to complete the work be L days  
 Then, 1 day work of L =  $\frac{1}{L}$

Number of days taken by M to complete the work = L-14 days

Then, 1 day work of M =  $L - 14$

$$\text{Given, } L + L - 14 = 24$$

$$\Rightarrow L^2 - 14L = 24$$

$$\Rightarrow L^2 - 62L + 336 = 0$$

$$\Rightarrow L^2 - 6L - 56L + 336 = 0$$

$$\Rightarrow L(L - 6) - 56(L - 6) = 0$$

$$\Rightarrow (L - 56)(L - 6) = 0$$

$$\Rightarrow L = 56 \text{ or } L = 6$$

Since, M can do the work 14 days less than L, L cannot be 6.

Hence, L can do the work in 56 days.

### Question 6

If C alone can complete two-third part of a work in 12 days, then in how many days C can complete the whole work?

- A 24 days
- B 15 days
- C 8 days
- D 18 days

**Answer:** D

### Explanation:

Given, C can complete  $\frac{2}{3}$ rd part of work in 12 days.

$$\frac{2}{3} \text{ --- } > 12$$

$$1 \text{ --- } > ?$$

Total work will be completed in  $1 \times \frac{12}{2} \times 3 = 18$  days

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### Question 7

A train is moving at the speed of 20 m/sec. If the length of train is 540 metres, then how much time will it take to cross a pole?

- A 108 seconds
- B 81 seconds
- C 27 seconds
- D 54 seconds

**Answer:** C

### Explanation:

Given that the speed of the train = 20 m/sec  
Length of the train = 540 m

Time required to cross a pole is the time required to cross its length =  $\frac{540}{20} = 27$  seconds

### Question 8

**A train covers a certain distance at a speed of 45 m/s in 15 minutes. How much time it will take to cover the same distance at the speed of 60 m/s?**

- A 3.25 minutes
- B 4.75 minutes
- C 6.75 minutes
- D 11.25 minutes

**Answer:** D

### Explanation:

Given, Speed of the train = 45 m/sec

Time taken to cover a certain distance = 15 minutes =  $15 \times 60 = 900$  seconds

Then, Distance travelled by the train =  $45 \times 900 = 40500$  m

New speed = 60 m/sec

Then, Time taken to travel 40500 m =  $\frac{40500}{60} = 675$  seconds =  $\frac{675}{60} = 11.25$  minutes

### Question 9

**A 250 metre long train takes 30 seconds to cross a 350 metres long bridge. How much time train will take to cross a 550 metre long bridge?**

- A 38 seconds
- B 42 seconds
- C 40 seconds
- D 35 seconds

**Answer:** C

### Explanation:

Length of the train = 250 m

Length of the first bridge = 350 m

Total distance to be travelled to cross the bridge =  $250 + 350 = 600$  m

Then, Speed of the train =  $\frac{600}{30} = 20$  m/sec

Length of the second bridge = 550 m

Total distance =  $550 + 250 = 800$  m

Then, Time taken =  $\frac{800}{20} = 40$  seconds

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### Question 10

**A pipe can fill a cistern in 20 minutes whereas the cistern when full can be emptied by a leak in 28 minutes. When both are opened, the time taken to fill the cistern is:**

- A 48 min

**B** 70 min

**C** 80 min

**D** 60 min

**Answer:** B

**Explanation:**

Let the capacity of the cistern be 140 units.

Efficiency of pipe =  $140/20 = 7$  units per minute

Efficiency of leakage =  $140/-28 = -5$  units per minute

Then, When both are opened, the cistern can be filled at 2 units per minute.

Therefore, 140 units can be filled in  $140/2 = 70$  minutes.

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