



## Time and Distance Questions for SSC CGL Tier 2 PDF

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### Instructions

For the following questions answer them individually

#### Question 1

Four runners started running simultaneously from a point on a circular track. They took 200 seconds, 300 seconds, 360 seconds and 450 seconds to complete the round. After how much time to they meet at the starting point for the first time?

- A 1800 seconds
- B 3600 seconds
- C 2400 seconds
- D 4800 seconds

Answer: A

#### Explanation:

Meeting at the first time will be L.C.M. of time taken by individuals to complete i.e. L.C.M. of 200,300,360 and 450 will be equal to 1800 sec.

#### Question 2

Walking at  $\frac{6}{7}$ th of this usual speed a man is 25 minutes too late. His usual time to cover this distance is

- A 2 hours 30 minutes
- B 2 hours 15 minutes
- C 2 hours 25 minutes
- D 2 hours 10 minutes

Answer: A

#### Explanation:

Let the initial speed and time be  $s, t$  respectively,  
then speed and time in the next case are  $\frac{6s}{7}$  and  $(t+25)$   
As distance = speed \* time, and distance travelled in both cases is the same,  
 $(\frac{6s}{7}) * (t+25) = s * t$   
Solving the above equation results in  $t=150\text{min}$

#### Question 3

With average speed of 40 km/hour, a train reaches its destination in time. If it goes with an average speed of 35 km hour, it is late by 15 minutes. The total journey is

- A 30 km
- B 40 km
- C 70 km
- D 80 km

Answer: C

#### Explanation:

Let the time and distance be  $t$  mins and  $d$  km respectively,  
If it goes with an average speed of 40 km/hour, a train reaches its destination in time.  
So, distance =  $(40 * t) / 60$   
If it goes with an average speed of 35 km hour, it is late by 15 minutes.  
So, distance =  $35 * (t+15) / 60$

In both the cases, distance is same,  
So,  $40*t = 35*(t+15)$   
Solving the above equation gives  $t = 105$   
and  $d = (40*105)/60 = 70$

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### Question 4

Three men A, B and C working together can do a job in 6 hours less time than A alone, in 1 hour less time than B alone and in one half the time needed by C when working alone. Then A and B together can do the Job in

- A  $2/3$  hour
- B  $3/4$  hour
- C  $3/2$  hour
- D  $4/3$  hour

Answer: D

### Explanation:

Let time taken by A alone =  $x$  hours

=> Time taken by A, B & C together =  $(x - 6)$  hours

=> Time taken by B alone =  $(x - 5)$  hours

=> Time taken by C alone =  $2(x - 6)$  hours

Now, rate of work of A + rate of work of B + rate of work of C = rate of work of A,B,C together

$$\Rightarrow \frac{1}{x} + \frac{1}{x-5} + \frac{1}{2(x-6)} = \frac{1}{x-6}$$

On solving above equation, we get  $x = 3, \frac{40}{6}$

When  $x = 3$ , the expression  $(x - 6)$  becomes negative, thus it's not possible.

$$\Rightarrow x = \frac{40}{6}$$

Time taken by A & B together =  $\frac{3 \frac{1}{3}}{20+5}$

$$= \frac{4}{3} \text{ hours}$$

### Question 5

A takes three times as long as B and C together to do a job. B takes four times as long as A and C together to do the work. If all the three, working together can complete the job in 24 days, then the number of days, A alone will take to finish the job is

- A 100
- B 96
- C 95
- D 90

Answer: B

### Explanation:

Let time taken by B and C =  $x$  days

=> Time taken by A =  $3x$  days

Thus, part of work done by A, B & C in 1 day

$$= \frac{1}{x} + \frac{1}{3x} = \frac{4}{3x}$$

Acc to ques :

$$\Rightarrow \frac{4}{3x} = \frac{1}{24}$$

$$\Rightarrow x = \frac{4 \times 24}{3} = 32 \text{ days}$$

$\Rightarrow$  Time taken by A alone =  $32 \times 3 = 96$  days

#### Question 6

Walking at 5 km/hr a student reaches his school from his house 15 minutes early and walking at 3 km/hr he is late by 9 minutes. What is the distance between his school and his house?

- A 5 km
- B 8 km
- C 3 km
- D 2 km

**Answer:** C

#### Explanation:

Let the time and distance be  $t$  mins and  $d$  respectively,

In the first case:

Total time taken =  $(t - 15)$  mins =  $(t-15)/60$  hrs.

Distance travelled =  $5 \times (t-15)/60$

In the second case:

Total time taken =  $(t + 9)$  mins =  $(t+9)/60$  hrs.

Distance travelled =  $3 \times (t+9)/60$

So,  $5 \times (t-15)/60 = 3 \times (t+9)/60$ ,

Solving the above equation we get,  $t=51$

So,  $d=3 \times (51+9)/60$

=3 KMs

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#### Question 7

The speed of a boat in still water is 6 km/h. If it takes four times as much time as going upstream as in going same distance downstream, the speed of the stream is:

- A 2.5 km/h
- B 3.6 km/h
- C 5 km/h
- D 4.2 km/h

**Answer:** B

#### Question 8

The speed of a car increases by 2 km/hr after every one hour. If the distance travelled in the first one hour was 35 km, what was the total distance travelled in 12 hours?

- A 558 km

- B 650 km
- C 560 km
- D 552 km

**Answer: D**

**Explanation:**

The distances travelled by the car in each hour will be 35,37,39,....

The distance travelled in the last hour will be  $35 + \frac{(12-1)2}{2} = 35 + 12 = 57$  km

Then, Total distance travelled in 12 hours =  $2(35 + 57) = 6 \times 92 = 552$  km

**Question 9**

**A wheel makes 4000 revolution is covering a distance of 60km. The radius of the wheel is:**

- A 8m
- B 8.25m
- C 4.68m
- D 2.39m

**Answer: D**

**Explanation:**

Distance covered in 1 revolution =  $\frac{60 \times 1000}{4000} = 12.5m$

According to the question,

$$2 \times \pi \times r = 15$$

$$\Rightarrow r = 2.39$$

Option D is correct

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**Question 10**

**A train is moving at 72 km/hrs. The distance covers in 15 minutes by the train is:**

- A 18 km
- B 27 km
- C 36 km
- D 28 km

**Answer: A**

**Explanation:**

A train is moving at 72 km/hrs.

72 km/h in 60 minutes =  $\frac{72}{60} = 1.2$  km per minute

So in 15 minutes it will cover  $1.2 \times 15 = 18$  km

Option A is correct.

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