



## Time Speed Distance Questions for TISSNET

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature without the permission of cracku.in, application for which shall be made to [support@cracku.in](mailto:support@cracku.in)

### Instructions

For the following questions answer them individually

#### Question 1

A truck covers a certain distance in 12 h at the speed of 70 km/h. What is the average speed of a car which travels a distance of 120 km more than the truck in the same time ?

- A 76 km/h
- B 85 km/h
- C 82 km/h
- D 78 km/h
- E None of these

**Answer:** E

#### Explanation:

The distance travelled by the truck in 12 hours equals  $12 \times 70 = 840$  km  
Hence, the car travels  $840 + 120 = 960$  kms in 12 hours.

So, the average speed of the car equals  $\frac{960}{12} = 80$  kmph

#### Question 2

A 420 m long train crosses a pole in 70 seconds. What is the speed of the train ?

- A 5 m/s
- B 7 m/s
- C 4.5 m/s
- D Cannot be determined
- E None of these

**Answer:** E

#### Explanation:

Time taken by the train to cross the pole is 70 seconds.  
The length of the train is 420 metres.

Hence, the speed of the train is  $\frac{420}{70} = 6$  m/s.

#### Question 3

Neela, Saroj and Paulami start running around a circular stadium and complete one round in 10 s, 6 s, and 14 s, respectively. In how much time will they meet again at the starting point ?

- A 3 min, 30 s
- B 2 min 28 s
- C 4 min 45 s
- D 1 min 40 s
- E None of these

**Answer:** A

**Explanation:**

Neela completes one round around the circular stadium in 10 seconds.

Saroj completes one round around the circular stadium in 6 seconds.

Paulami completes one round around the circular stadium in 14 seconds.

Hence, the three of them meet again at the starting point in LCM(10,6,14) seconds.

The least common multiple (LCM) of 10,6 and 14 is 210 seconds.

So, the three of them meet again after 210 seconds which is 3 minutes 30 seconds.

**Question 4**

A 240 metre long train crosses a 300 metre long platform in 27 seconds. What is the speed of the train in kmph ?

- A 66
- B 60
- C 76
- D 64
- E None of these

**Answer:** E

**Explanation:**

The total distance travelled by the train equals  $240+300 = 540$  metres.

This distance is covered by the train in 27 seconds.

Hence, the speed of the train equals  $\frac{540}{27} = 20$  m/s

This speed when converted to kmph equals  $20 * \frac{18}{5} = 72$  kmph

As this is not given in the options, the correct answer is option (e)

**Question 5**

A train running at the speed of 60 kmph crosses a 200 metre long platform in 27 seconds. What is the length of the train ?

- A 250 metres
- B 200 metres
- C 240 metres
- D 450 metres
- E None of these

**Answer:** A

**Explanation:**

Let the length of the train be S.

So, the total distance travelled by the train while crossing the platform is  $S+200$ .

The speed of the train is 60 Kmph and the time taken is 27 seconds.

The speed of the train in m/s is  $60 * \frac{5}{18} = \frac{50}{3}$  m/s

So,  $S + 200 = \frac{50}{3} * 27 = 450$

Hence,  $S = 250$  metres.

**Question 6**

A boat running downstreams covers a distance of 16 km in 2 hours while for covering the same distance upstream it takes 4 hours. What is the speed of the boat in still water?

- A 4 kmph
- B 6 kmph
- C 8 kmph
- D Data inadequate
- E None of these

**Answer: B**

**Explanation:**

Let the speed of the boat in still water be  $B$  and the speed of the water be  $W$ .  
So, speed of the boat downstream is  $B+W$  and the speed of the boat upstream is  $B-W$ .

From the information given, the speed of the boat downstream is  $16/2 = 8$  kmph  
Speed of the boat upstream is  $16/4 = 4$  kmph

Hence,  $B+W = 8$  and  $B-W = 4$   
So,  $B = 6$  kmph and  $W = 2$  kmph

## Take TISSNET Mock Tests

**Question 7**

A train running at the speed of 66 kmph crosses a signal pole in 18 seconds. What is the length of the train?

- A 330 meters
- B 300 metres
- C 360 metres
- D 320 metres
- E None of these

**Answer: A**

**Explanation:**

$66 \text{ kmph} = 66 \times \frac{5}{18} \text{ m/s}$

It takes 18 secs to cross the post. So, length =  $66 \times 18 \times \frac{5}{18} = 330$  metres.

**Question 8**

Two cars A and B are running in the same direction. Car 'A' had already covered a distance of 60 kms, when car 'B' started running. The cars meet each other in 3 hours after car 'B' started running. What was the speed of car 'A' ?

- A 40 kmph
- B 60 kmph
- C 45 kmph
- D Cannot be determined
- E None of these

**Answer: D**

**Explanation:**

Let the speed of car A be ' $x$ ' kmph and the speed of car B be ' $y$ ' kmph.

By the time car B started running, car A covered 60 Km.

Distance covered by B in three hours is  $3y$

Distance covered by A in three hours is  $3x$

So,  $3y = 3x + 60$  or  $y = x + 20$

Hence, the speed of B is 20 kmph more than the speed of A. As we don't know the speed of car B, we can't find the exact speed of car A.

We can just infer that the speed of car A is 20 kmph less than the speed of car B.

#### Question 9

A 275 metre long train crosses a platform of equal length in 33 seconds. What is the speed of the train in kmph ?

- A 66
- B 60
- C 64
- D 72
- E None of these

**Answer: B**

#### Explanation:

The length of the train is 275 m. Hence, the length of the platform is also 275 m.

The train covers a total distance of 550 m in 33 seconds.

Hence, the speed of the train is  $\frac{550}{33} = \frac{50}{3}$  m/s

To convert this speed into kmph, we need to multiply it by  $\frac{18}{5}$

Hence, the speed of the train in kmph is  $\frac{50}{3} * \frac{18}{5} = 60$  kmph

So, the correct option is option (b)

#### Question 10

A train running at a speed of 60 kmph crosses a platform double its length in 32.4 seconds. What is the length of the platform?

- A 108 metres
- B 240 meters
- C 360 meters
- D 90 meters
- E Cannot be determined

**Answer: C**

#### Explanation:

Let the length of the train be 'x' metres

Length of the platform =  $2x$

Distance travelled by the train =  $x + 2x = 3x$

Speed of the train = 60 kmph =  $60 \times \frac{5}{18}$  m/sec

Distance = Speed  $\times$  Time

$$3x = 60 \times \frac{5}{18} \times 32.4$$

$$x = 180$$

The length of the platform =  $2x = 360$  m

#### Question 11

A 160 metre long train running at a speed of 90 kmph crosses a platform in 18 seconds. What is the length of the platform in metres?

- A 210
- B 240
- C 290
- D 310
- E None of these

**Answer: C**

**Explanation:**

Let the length of the platform be 'x' metres

Distance travelled by the train =  $160 + x$

Speed of the train = 90 kmph =  $90 \times \frac{5}{18} = 25$  m/sec

Distance = Speed  $\times$  Time

$$160 + x = 25 \times 18$$

$$x = 290$$

Length of the platform = 290 m

**Question 12**

A tap A fills a tank in 30 hours. Another tap B fills the tank in 24 hours. If the taps are opened for one hour each alternately, in how many hours would the tank be full?

- A 10 hours
- B  $40/3$  hours
- C  $80/3$  hours
- D 20 hours
- E 30 hours

**Answer: C**

**Explanation:**

In one hour, A fills  $1/30$ th of the tank

In one hour, B fills  $1/24$ th of the tank

In two hours, A and B alternately fill  $1/30 + 1/24 = 4/120 + 5/120 = 9/120 = 3/40$ th of the tank

Hence, they will take  $2/(3/40) = 80/3$  hours to fill the tank.

## Cracku CAT Success Stories

**Question 13**

The speeds of a boat downstream and upstream are 18 km/hr and 8 km/hr respectively. What is the speed of the stream?

- A 2 km/hr
- B 3 km/hr
- C 4 km/hr
- D 5 km/hr
- E None of these

**Answer: D**

**Explanation:**

Let the speed of the boat in still water be 'u'.

Let the speed of the stream be 'v'.

The speed of the boat upstream =  $u - v$

The speed of the boat downstream =  $u + v$

It is given that,

$$u - v = 8 \text{ and } u + v = 18$$

Solving them we get,  $u = 13$  and  $v = 5$ .

Thus the speed of the stream is 5 km/hr.

Hence the answer to this question is Option D.

**Question 14**

A person has to travel from point B in certain time. Travelling at a speed of 5 kmph he reaches 48 minutes late and while travelling at a speed of 8 kmph he reaches 15 minutes early. What is the distance from point A to point B?

- A 15 kms
- B 91 kms
- C 12 kms
- D 18 kms
- E 14 kms

**Answer:** E

**Explanation:**

Let the distance between A and B be 'd' km and time taken be 't' hrs.

In both the cases, distance travelled is the same.

Distance = Speed  $\times$  Time

Case (i) Time taken = 48 min late =  $(t + 0.8)$  hrs

$$d = 5 \times (t + 0.8)$$

Case (ii) Time taken = 15 min early =  $(t - 0.25)$  hrs

$$d = 8 \times (t - 0.25)$$

On equating them, we get

$$5t + 4 = 8t - 2$$

$$t = 2$$

$$\text{Distance, } d = 5(2 + 0.8) = 14 \text{ km}$$

**Question 15**

Ram and Shyam are travelling from point A to B, which are 60km apart. Travelling at a certain speed Ram takes one hour more than Shyam to reach point B. If Ram doubles his speed he will take 30 minutes less than Shyam to reach point B. At what speed was Ram driving from point A to B?

- A 15 kmph
- B 35 kmph
- C 30 kmph
- D 25 kmph
- E 20 kmph

**Answer:** E

**Explanation:**

Let the speed of Ram be 'v' kmph

Time taken by Shyam be 't' hrs

Distance = Speed  $\times$  Time  
 $60 = v(t + 1)$   
 After doubling the speed,  
 $60 = 2v(t - 0.5)$   
 Simplifying them, we get  
 $v(t + 1) = 2v(t - 0.5)$   
 $t = 2$   
 $v = 60/3 = 20 \text{ kmph}$

## Take 3 Free CAT Mocks (With Solutions)

### Question 16

The respective ratio between speed of the boat upstream and speed of the boat downstream is 3 : 4. What is the speed of the boat in still water if it covers 70 km downstream in 3 hours 30 minutes? (in km/h)

- A 18
- B 18.5
- C 17
- D 17.5
- E 16

**Answer:** D

### Explanation:

Let the speed of boat in still water and speed of river be B km/hr and R km/hr respectively

Speed of boat in downstream = (B+R)km/hr

Speed of boat in upstream = (B-R) km/hr

It is given that  $\frac{B-R}{B+R} = \frac{3}{4}$

we get,  $B = 7R$

Now it is given that boat covers 70 km in 3.5 hours downstream

so,

$$70 = (B+R)3.5$$

$$B+R = 20$$

$$R = 2.5 \text{ km/hr}$$

$$B = 17.5 \text{ km/hr}$$

### Question 17

A train 350 m long takes 36 seconds to cross a man running at a speed of 5 km/h in the direction opposite to that of train. What is the speed of the train?

- A 30 km/h
- B 40 km/h
- C 24 km/h
- D 34 km/h
- E Other than those given as options

**Answer:** A



**Explanation:**

Let the speed of the train be  $x$  m/s

Speed of the man =  $5\text{ km/hr} = 1.388\text{ m/s}$

Relative speed of man when he is running in opposite direction =  $(x + 1.388)$

However train crosses him in 36 seconds =  $350/36 = 9.722\text{ m/s}$

$$x + 1.388 = 9.722$$

$$x = 8.334\text{ m/s}$$

$$x = 30\text{ km/hr}$$

**Question 18**

A boat running downstream covers a distance of 24 km in 4 hours, while for covering the same distance upstream it takes 6 hours. What is the speed of the boat in still water?

- A 5.5 kmph
- B 6 kmph
- C 3.5 kmph
- D Data inadequate
- E None of these

**Answer:** E

**Explanation:**

Let the speed of the boat be  $S$  and the speed of the stream be  $R$ .

$$\text{So, } 24 / 4 = 6 = S + R$$

$$24 / 6 = 4 = S - R$$

$$\text{So, } 2S = 10 \Rightarrow S = 5 \text{ and } R = 1$$

So, speed of the boat in still water = 1 kmph

**Join MBA Telegram Group**

**Question 19**

A motor starts with the speed of 70 kmph with its speed increasing every two hours by 10 kmph. In how many hours will it cover 345 km?

- A  $2\frac{1}{4}$  hours
- B  $4\frac{1}{2}$  hours
- C 4 hours 5 minutes
- D Cannot be determined
- E None of these

**Answer:** B

**Explanation:**

Distance = Speed  $\times$  Time

Initial speed = 70 kmph

In first 2 hours, motor covers a distance =  $70 \times 2 = 140\text{ km}$

Speed after 2 hours =  $70 + 10 = 80\text{ kmph}$

In the next 2 hours, it covers a distance =  $80 \times 2 = 160 \text{ km}$

Distance covered = 300 km

Now, the speed is 90 kmph

Remaining 45 km is covered in  $\frac{45}{90} = 0.5 \text{ hr}$

Total time taken to cover 345 km =  $2 + 2 + 0.5 = 4.5 \text{ hr}$

#### Question 20

Swati walks 150 m everyday. How many kilometers will she walk in three weeks ?

- A 2.04
- B 5.92
- C 4.18
- D 3.15
- E None of these

**Answer:** D

#### Explanation:

The number of days in 3 weeks is  $3 \times 7 = 21$

Swati walks 150 metres everyday.

Hence, the distance covered by Swati in 3 weeks equals  $150 \times 21 = 3150$  metres

1000 metres equal one kilometre. Hence, the distance covered by Swati in 3 weeks is 3.15 km

**Take TISSNET Mock Tests**

**Cracku CAT Success Stories**

**Take 3 Free CAT Mocks (With Solutions)**

**Join MBA Telegram Group**

**CMAT Free Solved Previous Papers.**

**Take a CMAT free mock test**

**Subscribe to MBA Exams Youtube Channel**

**Join CAT 2022 Online Coaching**