TIME & DISTANCE APTI Q&A

BY

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1. Excluding stoppages, the speed of a bus is 54 kmph and including stoppages, it is 45 kmph. For how many minutes does the bus stop per hour?

[A] 9

[B] 10

[C] 12

[D] 20

ANS : B

Explanation:

Due to stoppages, it covers 9 km less.

Time taken to cover 9 km = [(9/54)*60 min = 10 min.

2. The average speed of a train in the onward journey is 25% more than that in the return journey. The train halts for one hour on reaching the destination. The total time taken for the complete to and from journey is 17 hours, covering a distance of 800 km. The speed of the train in the onward journey is:

[A] 45 km/hr

[B] 47.5 km/hr

[C] 52 km/hr

[D] 56.25 km/hr

ANS: D

Explanation:

Let the speed in return journey be x km/hr.

Then, speed in onward journey =(125/100)x = (5/4)x km/hr

So. Speed in onward journey = [(5/4)*45] km/hr = 56.25 km/hr

3. Walking (6/7) th of his usual speed, a man is 12 minutes too late. The usual time taken by him to cover that distance is:

[A] 1 hour

[B] 1 hr 12 min

[C] 1 hr 15 min

[D] 1 hr 20 min

ANS: B

Explanation:

New speed = (6/7)of usual speed.

New time = (7/6) of usual time.

Therefore (7/6 of usual time)- (usual time) = (1/5) hr.

=> (1/6 of usual time)= (1/5) hr => usual time = (6/5) hr = 1 hr 12 min.

4. Three persons are walking from a place A to another place B. Their speeds are in the ratio of 4 : 3 : 5. The time ratio to reach B by these persons will be :

[A] 4 : 3 : 5

[B] 5 : 3 : 4

[C] 15 : 9 : 20

[D] 15 : 20 : 12

ANS: D

Explanation:

Ratio of speeds = 4 : 3 : 5

Therefore Ratio of times taken = (1/4) : (1/3) : (1/5) = 15 : 20 : 12

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

[A] 2 (1/4) hrs

[E] None of these

[C] 4(1/2) hrs

[B] 4 hrs 5 min

[D] Can not be determined

ANS : C

Explanation:

Distance covered in first 2 hours = (70 x 2) km = 140 km

Distance covered in next 2 hours = (80 x 2) km = 160 km

Remaining distance = 345 – (140 + 160) = 45 km.

Speed in the fifth hour = 90 km/hr

Time taken to cover 45 km =(45/90) hr = (1/2) hr

Therefore Total time taken = 2 + 2 + (1/2) = 4 (1/2)hrs

6. A thief is noticed by a policeman from a distance of 200 m. The thief starts running and the policeman chases him. The thief and the policeman run at the rate of 10 km and 11 km per hour respectively. What is the distance between them after 6 minutes?

[A] 100 m

[B] 150 m

[C] 190 m

[D] 200 m

ANS: A

Explanation:

Relative speed of the thief and policeman = (11 – 10) km/hr = 1 km/hr

Distance covered in 6 minutes =[(1/60)*6] km = (1/10)km = 100 m.

Distance between the thief and policeman = (200 – 100) m = 100 m.

7. A person travels from P to Q at a speed of 40 kmph and returns by increasing his speed by 50%. What is his average speed for the both the trips?

[A] 36 kmph

[B] 45 kmph

[C] 48 kmph

[D] 50 kmph

ANS: C

Explanation:

Speed on return trip = 150% of 40 = 60 kmph.

Therefore Average speed =[(2 x 40 x 60)/(40 + 60)] km/hr = (4800/100) km/hr = 48 km/hr.

8. A man takes 5 hours 45 min. in walking to a certain place and riding back. He would have gained 2 hours by riding both ways. The time he would take to walk both ways, is:

[A] 3 hrs 45 min

[B] 7 hrs 30 min

[C] 7 hrs 45 min

[D] 11 hrs 45 min

ANS: C

Explanation:

Let the distance be x km. Then,

(Time taken to walk x km) + (Time taken to ride x km) = (23/4)hrs

=> (Time taken to walk 2x km) + (Time taken to ride 2x km) =(23/2)hrs

But, time taken to ride 2x km = (15/4) hrs

Time taken to walk 2x km =[(23/2) - (15/4)] hrs = (31/4) hrs = 7 hrs 45 min.

9. A can complete a journey in 19 hours. He travels first half of the journey at the rate of 21 km/hr and second half at the rate of 24 km/hr. Find the total journey in km.

[A] 220 km

[B] 224 km

[C] 230 km

[D] 234 km

ANS: B

Explanation:

Let the total distance be X km. Then,

=> 15x = 168 x 20 => x = [(168 x 20)/15] = 224 km.

10. Bombay Express Left Delhi from Bombay at 14.30 hrs, travelling at a speed of 60 kmph and Rajdhani Express left. Delhi for Bombay on the same day at 16.30 hrs, travelling at a speed of 80 kmph. How far away from Delhi will the two trains meet?

[A] 120 km

[B] 360 km

[C] 480 km

[D] 500 km

ANS: C

Explanation:

Suppose they meet x hours after 14.30 hrs.

Then, 60x = 80 (x – 2) or x = 8.

Required distance = (60 x 8) km = 480 km.