SmartKeeda
The Question Bank

Presents

TestZone

India's least priced Test Series platform

JOIN

12 Month Plan
2017-18 All Test Series

@ Just

₹399/-
300+ Full Length Tests

- ☑ **Brilliant Test Analysis**
- ☑ **Excellent Content**
- ☑ **Unmatched Explanations**

JOIN NOW

Time and Distance Questions for IBPS Clerk Mains, SBI Clerk Mains, SBI PO Pre and IBPS PO Pre Exams.

Time and distance Quiz 7

Directions: Study the following Questions carefully and choose the right answer:

1. Shivam travels 20% distance of the total journey by car and 50% of the remaining by train and taxi in the respective ratio of 5:3 and the remaining distance he covers on feet. If the sum of the distance which he travels by car and by Taxi is 126 km, then find the total distance which Shivam travels during his journey?

A. 360 km   B. 640 km   C. 420 km   D. 400 km   E. 210 km

2. A beats B by 15 sec in a 200 m race, B beats C by 25 sec in a 500 m race, C beats D by 32 sec in 800 m race and D beats E by 35 sec in a 1 km race. What must be the speed of A in order to beat E by 800 m in a 2 km race?

A. 2.5 m/s   B. 3.33 m/s   C. 5 m/s   D. 6.66 m/s   E. None of these

3. There is a race of 1 km among Hiten, Vikash and Priyank. Hiten and Vikash run 1 km and Hiten wins by 10 seconds. Hiten and Priyank run 1 km and Hiten wins by 125 mt. When Vikash and Priyank run a km, Vikash wins by 15 seconds. What is the ratio of time taken by Hiten and Vikash to run a km?

A. 38 : 31   B. 33 : 35   C. 35 : 37   D. 13 : 47   E. None of these

4. P, Q and R start running around a circular field having circumference 88 metre at the same time from the same point. Speeds of P, Q and R are 4 m/minute, 8 m/minute and 11 m/minute. Find after how much time, they will meet again at the same point for the first time.

A. 88 minutes   B. 44 minutes   C. 40 minutes   D. 60 minutes   E. None of these

5. The distance between Kanpur and Bangalore by flight is 1800 km. An aircraft was slowed down due to bad weather. The time of journey of Bangalore from Kanpur is increased by 30 minutes and the average speed for the journey was reduced by 300 km/h. What is the usual duration of the flight if there is no bad weather?

A. 3/2 hours   B. 4/5 hours   C. 6/5 hours   D. 2/3 hours   E. None of these

6. A bus is running with a speed of 30 km/h on the road beside a railway track. The bus is 260 metres ahead of the engine of a 440 metres long train running with the speed 156 km/h in the same direction. In how much time will the train pass the bus completely?

A. 20 seconds   B. 40 seconds   C. 35 seconds   D. 25 seconds   E. None of these

7. In 2016 Rio Olympic race of 600 m, Bolt beats Gatlin by 60 m and in race of 500 m, Gatlin beats Blake by 25 m. By how many metres will Bolt beat Blake in a 400 m race?

A. 270 m   B. 370 m   C. 130 m   D. 240 m   E. None of these

8. Amitabh, Dharmendra and Jitendra start from the same place and travel in the same direction at the speed of 20 km/hr, 30 km/hr and 40 km/hr respectively. Dharmendra starts two hours after Amitabh. If Dharmendra and Jitendra overtake Amitabh at the same moment, how many hours after Amitabh did Jitendra start?

A. 4 hours   B. 3 hours   C. 6 hours   D. 5.5 hours   E. None of these

9. Everyday, Sakshi's husband meets her at New Delhi railway station at 5 pm and drives her to their house. One day, Sakshi reaches the station at 4 pm. She doesn't wait and starts walking towards her house. On the way, she meets her husband coming from their house, and so she gets into the car they drive home. They reach 10 minute earlier than the usual time. For how long did Sakshi walk?

A. 1 hour   B. 40 minute   C. 50 minute   D. 55 minute   E. 45 minute

10. Ram travels by a bicycle from Ranipur to Rajapur. Both towns are at the same height above sea level. The road he travels on has a total length of 20 km. However, there are few hills on the road. Ram is able to maintain a constant speed of 10 km/hr on level terrain, a constant speed of 6.5 km/hr travelling uphill, and a constant speed of 13.5 km/hr travelling downhill. How long does Ram's journey take, in minutes?

A. 90   B. 100   C. 120   D. Data insufficient   E. None of these

Correct Answers:

1	2	3	4	5	6	7	8	9	10
A	B	C	A	A	A	E	B	D	D

Explanations:

1. Let total distance = 100x

Distance covered by car = 20% of 100x = 20x

Distance covered by Train = $\dfrac{5}{5+3}$ × 50% of (100x − 20x) = $\dfrac{5}{8}$ × 40 x = 25x

Distance covered by Taxi = $\dfrac{3}{5+3}$ × 50% of (100x − 20x) = $\dfrac{3}{8}$ × 40 x = 15x

Distance covered on feet = 100x − 20x − 25x − 15x = 40x

Total distance covered by Car and Taxi = 20x + 15x = 35x = 126 km (Given)

Length of journey = 100 × $\dfrac{126}{35}$ = 360 km

Hence, option (A) is correct.

---

2.   A beats B by 15 sec means A reaches the destination 15 sec ahead of B or B reaches 15 sec later than B. Let all of them compete in a 2 km or 2000 m race, now we can compare them as follows:

A beats B by 150 sec, B beats C by 100 sec, C beats D by 80 sec, D beats E by 70 sec, ⇒ E would finish the race 400 sec after A.

Now, if A has to beat E by 800 m then we can say that E will cover the remaining 800m in 400sec, and cover 2000m in 1000 sec. A has to reach 400s earlier i.e in 600 sec,

so A's speed = $\dfrac{2000}{600}$ = 3.33 m/s.

Hence, option (B) is correct.

---

3. If Hiten covers 1 km in x seconds, Vikash covers the same distance in (x +10) seconds.
If Hiten covers 1 km, then in the same time Priyank covers only 875 mt.
If Vikash covers 1 km in (x + 10) sec, then Priyank covers 1 km in (x + 25) sec
Thus in x seconds Priyank covers the distance of 875 mt.

⇒ $\dfrac{x}{875}$ × 1000 = x + 25

⇒ x = 175

 Time taken by Hiten to complete 1 km = 175 seconds
Time taken by Vikash to complete 1 km = 185 seconds
Required ratio = 175 : 185 = 35 : 37
Hence, option (C) is correct.

4. Time taken by A to complete one round

$= \dfrac{88}{4} = 22$ minutes

Time taken by B to complete one round

$= \dfrac{88}{8} = 11$ minutes

Time taken by C to complete one round

$= \dfrac{88}{11} = 8$ minutes

HCF of 22, 11 and 8 = 88
Hence, they will meet again after 88 minutes
Hence, option A is correct.

---

5. Let the usual duration of the flight be X hours

Usual speed of the flight $= \dfrac{1800}{X}$

Then, $\dfrac{1800}{X} - \dfrac{1800}{X + \dfrac{1}{2}} = 300$

$\Rightarrow \dfrac{1800}{X} - \dfrac{3600}{2X + 1} = 300$

$\Rightarrow X(2X + 1) = 6$
$\Rightarrow 2X^2 + X - 6 = 0$

$\Rightarrow X = \dfrac{3}{2}$ hours

Hence, option (A) is correct.

---

6. Relative speed of the train with respect to the bus = 156 − 30 = 126km/h

$= 126 \times \dfrac{5}{18} = 35$ m/s

Distance = 440 + 260 = 700 metre

Required time $= \dfrac{700}{35} = 20$ seconds

Hence, option (A) is correct.

7. When Bolt runs 600 m, Gatlin runs 540 m.

Hence, when Bolt runs 400 m, Gatlin will run = $\dfrac{540 \times 400}{600}$ = 360 m

Again, when Gatlin runs 500 m, Blake runs 475 m.

Therefore, when Gatlin runs 360 m, Blake will run = $\dfrac{475 \times 360}{500}$ = 342 m

Required difference in distance between Bolt and Blake = 400 – 342 = 58 meter.
That means Bolt will beat Blake by 58 m in 400 m race.
Hence, option E is correct.

8. Distance covered by Amitabh in 2 hours = 2 × 20 = 40 km
Time taken by Dharmendra to overtake Amitabh

= $\dfrac{40}{30 - 20}$ = 4 hours

This implies Amitabh had started 6 hrs before he was overtaken.
Distance covered by Dharmendra in this 4 hours = 30 × 4 = 120 km

Time take by Jitendra to cover = $\dfrac{120}{40}$ = 3 hours

It means Jitendra starts (6 – 3) = 3 hours after Amitabh.
Hence, option B is correct.

9.   **Approach 1:**
The total time saved by them is 10 minute, which can be divided equally between the car going to the station and coming back, i.e. 5 minute both ways.

∴ Instead of 5 pm, he must have met Sakshi at 4 : 55 pm

∵ Sakshi started walking at 4 pm, she walked for 55 minute.

Hence, option D is correct.

Approach 2:
Let the husband's speed while driving the car is 60 km/hr which means he covers 1 km in 1 minute.
Usual time taken by him while going to the station and coming back = (60 min to reach the station + 60 min to come back) = 120 minutes
In the given specific case, they saved 10 minutes time which means the husband must have taken 110 minutes.
Therefore, the time taken by the husband to meet Sakshi on the way = 110/2 = 55 minutes
Clearly, Sakshi must have walked for 55 minutes.
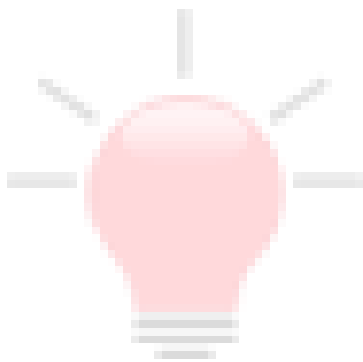Option D is hence the correct answer.

10. First, we need to find Ram's average speed.

Note that we are not sure whether the distance travelled uphill and the distance travelled downhill is the same or not because the slope uphill may or may not be equal to the slope downhill.

∴ Ram's average speed can't be together calculated.

∴ The time taken by Ram can't be calculated.

Hence Option D is correct.