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## Time and Distance Questions for Bank Clerk Pre Exams.

### Time and distance Quiz 6

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

1. A man starts from a place P and reaches the place Q in 7 hours. He travels  $\frac{1}{4}$  th of the distance at 10 km/hour and the remaining distance at 12 km/hour. The distance, in kilometer, between P and Q is:

- A. 70 km                      B. 72 km                      C. 80 km                      D. 90 km                      E. None of these

2. In the school, Mohan and Govind took a part in the race and the ratio between their speeds is 5 : 7. Mohan losses the race by 360m then what is the length of the track (in km)?

- A. 1.26 km                      B. 1.2 km                      C. 2 km                      D. 0.9 km                      E. None of these

3. The respective ratio between the speed of a car, a train, and a bus is 5 : 9 : 4. The average speed of the car, the bus and the train is 72 km/hr together. What is the average speed of the car and the train together?

- A. 82 km/h                      B. 72 km/h                      C. 84 km/h                      D. 67 km/h                      E. None of these

4. Ranvir goes to his office from his house at a speed of 16 km/hr and returns to his home from his office at a speed of 20 km/hr and he takes 4 hour 30 minutes in all. If the distance of his friend's house from his office is 20% more than the distance of his house from his office, find the distance of his house to his friend's house. (assuming the office lies between Ranvir's house and his friend's house)

- A. 80 km                      B. 60 km                      C. 92 km                      D. 70 km                      E. 88 km

5. Mohit and Anuj took a part in a race. Mohit runs 300m in 50 second and Anuj takes 1 minute to cover the same distance. By what distance will Mohit beat Anuj in 300 m race?

- A. 25 m                      B. 55 m                      C. 60 m                      D. 50 m                      E. None of these

6. A car covers four successive 7 km distances at speeds of 10 km/hour, 20 km/hour, 30 km/hour and 60 km/hour respectively. Its average speed over this distance is :

- A. 40 km/hr                      B. 20 km/hr                      C. 30 km/hr                      D. 50 km/hr                      E. None of these

7. The distance between point A and point B is 400 km. A person starts from point A with a speed of  $x$  km. and at the same time another person starts from B with a speed of  $x+10$  km. After 2 hours they meet each other. Find the ratio between their speeds.

- A. 19 : 20                      B. 21 : 18                      C. 15 : 19                      D. 23 : 22                      E. None of these

8. A person travelled 132 km by auto, 852 km by train and 248 km by bike. It took 21 hours in all. If the speed of train is 6 times the speed of auto and 1.5 times speed of bike, what is the speed of train?

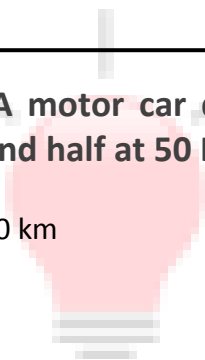
- A.  $78 \text{ kmh}^{-1}$                       B.  $104 \text{ kmh}^{-1}$                       C.  $96 \text{ kmh}^{-1}$                       D.  $88 \text{ kmh}^{-1}$                       E. None of these

9. A car drove from Agra to Delhi without stopping. It covered the first 50 miles of its journey at an average speed of 25 mph. What was the car's average speed (in mph), for the remaining 130 miles if it's overall average speed was 45 mph?

- A. 28                      B. 40                      C. 50                      D. 65                      E. None of these

10. A motor car does a journey in 16 hours, covering the first half at 30 Km/hr and the second half at 50 Km/hr. What is the distance covered?

- A. 480 km                      B. 540 km                      C. 500 km                      D. 400 km                      E. None of these



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**Correct Answers:**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
C	A	C	E	D	B	E	C	D	E

**Explanations:**

**1.** Let one-fourth of the distance between P and Q be  $x$  km  
then

$$\text{Time taken for the first one-fourth distance} = \frac{x}{10} \text{ km/hour}$$

and

$$\text{Time taken for the remaining distance} = \frac{3x}{12} \text{ km/hour}$$

Since Total time taken is 7 hours.

$$\Rightarrow 7 = \frac{x}{10} + \frac{3x}{12}$$

On solving,  $x = 20$

Total distance =  $4x = 80$  km.

Hence, option C is correct.

**2.**

$$t = \frac{D}{S}$$

According to the question,

Let Speed =  $5x$ , 7x Distance =  $y$  m

$$\frac{y - 360}{5x} = \frac{y}{7x}$$

$$\frac{y - 360}{5} = \frac{y}{7}$$

$$7(y - 360) = 5y$$

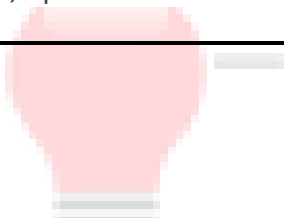
$$7y - 5y = 2520$$

$$2y = 2520$$

$$y = 1260$$

$$= 1.26 \text{ km.}$$

Hence, option A is correct.



**3.** Let speed of the car, the train, and the bus be  $5a$  Km/hr ,  $9a$  Km/hr and  $4a$  Km/hr respectively

Given

$$\text{total speed} = (72 \times 3) \text{ Km/hr} = 216 \text{ Km/hr}$$

$$\Rightarrow 5a + 9a + 4a = 216$$

$$\Rightarrow 18a = 216$$

$$\Rightarrow a = 12 \text{ Km/hr}$$

$$\Rightarrow \text{Speed of car} = 5 \times 12 = 60 \text{ Km/hr}$$

And

$$\text{speed of train} = 9 \times 12 = 108 \text{ Km/hr}$$

$$\Rightarrow \text{their average speed} = \frac{60 + 108}{2} = 84 \text{ Km/hr}$$

Hence, option (C) is correct.

**4.** Let the distance of his house to his office =  $D$  km

$$T = \frac{D}{S}$$

$$4 \text{ hour } 30 \text{ minutes} = \frac{D}{16} + \frac{D}{20}$$

$$\frac{9}{2} = \frac{5D + 4D}{80}$$

$$\frac{9}{2} = \frac{9D}{80}$$

$$D = 40$$

The distance from his house to his office = 40 km

The distance from his office to his friend's house =  $40 \text{ km} \times 120\% = 48 \text{ km}$

The distance from his house to his friend's house =  $40 + 48 = 88 \text{ km}$

Hence, option E is correct.

**5.** Mohit runs 300m in 50 sec.

Anuj runs 300m in 60 sec.

Now, In 1 sec Anuj runs 5m

Therefore, in 50 sec Anuj runs  $50 \times 5 = 250\text{m}$

Mohit beats Anuj by  $300 - 250 = 50\text{m}$ .

Hence, option D is correct.

**6.**

$$\text{Time taken at 10 km/hour} = \frac{7}{10} \text{hour}$$

$$\text{Time taken at 20 km/hour} = \frac{7}{20} \text{hour}$$

$$\text{Time taken at 30 km/hour} = \frac{7}{30} \text{hour}$$

$$\text{Time taken at 60 km/hour} = \frac{7}{60} \text{hour}$$

$$\text{Total time taken} = \frac{7}{10} + \frac{7}{20} + \frac{7}{30} + \frac{7}{60}$$

$$= \frac{7}{5} \text{hour}$$

$$= \text{Average speed} = \frac{7 \times 4}{5} = 20 \text{ km/hour}$$

Hence, option B is correct.

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**7.**  $D = S_1 \times T + S_2 \times T$

$$400 = x \times 2 + (x + 10) \times 2$$

$$400 = 2x + 2x + 20$$

$$400 - 20 = 4x$$

$$4x = 380$$

$$x = 95$$

$$S_1 = 95, S_2 = 105$$

$$\text{Ration} = 95 : 105$$

$$= 19 : 21$$

Hence, option E is correct.

8. Let the speed of auto be  $x \text{ kmph}^{-1}$ . So, the speed of train will be  $6x$  and that of bike will be

$$= \frac{6x}{1.5} = 4x$$

As per the given information,

Time taken by auto + Time taken by train + Time taken by bike = 21 hours

$$\Rightarrow \frac{132}{x} + \frac{852}{6x} + \frac{248}{4x} = 21$$

$$\text{or, } \frac{132}{x} + \frac{142}{x} + \frac{62}{x} = 21$$

$$\text{or, } 21x = 132 + 142 + 62 = 336$$

$$\therefore x = \frac{336}{21} = 16$$

$\therefore$  Speed of the train =  $6x$

$$= 6 \times 16 = 96 \text{ kmh}^{-1}$$

Hence, option C is correct.

9.

$$\text{Average speed} = \frac{\text{total distance}}{\text{total time}}$$

$$\text{Total distance} = 50 + 130 = 180 \text{ miles}$$

$$\therefore \text{Total time} = \frac{180}{45} = 4 \text{ hours.}$$

$$\text{Time spent for the first 50 miles} = \frac{50}{25} = 2 \text{ hours}$$

$$\therefore \text{Time spent on the remaining journey} = 4 - 2 = 2 \text{ hours}$$

$\therefore$  Average speed for the remaining 130 miles

$$= \frac{130}{2} = 65 \text{ mph}$$

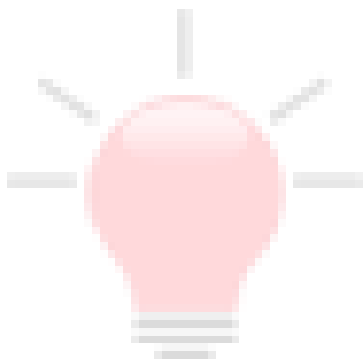
Hence, option D is correct.

**10.** Since different speeds are travelled for equal distance, the average speed can be found out

$$\text{Average speed} = \frac{(2 \times 30 \times 50)}{(30 + 50)} = \frac{300}{8} \text{ km/h}$$

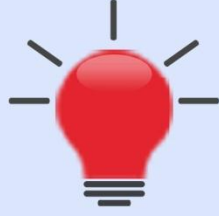
$$\text{Distance covered} = \frac{300}{8} \times 16 = 600 \text{ km}$$

Hence, option E is correct.



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