Time Speed And Distance Questions Overview

Time Speed And Distance Questions have a good weightage in the Banking Exam and the type of question asked in Banking exam is similar to the question mentioned below. It has been solved and explained by Gargi.ai Experts and they have tried to elaborate the concept used in Time Speed And Distance Questions.

Question

On a particular day, three friends Sameer, Simran and Mansi have to reach Agra from Gwalior. But due to an epidemic, no public transport is available and the only way to reach Agra for them is the Sameer's bike but due to stringent traffic rules, only two people can travel on the bike at a time. If all of them can walk at a speed of 5 km/hr and the speed of the bike is 35 km/hr. If all of them start simultaneously from Gwalior and they have to reach Agra simultaneously. In how much time the journey will be completed if the distance between Agra and Gwalior is 200 km?

Difficulty : Moderate   **Average Time : 56 Seconds**

Options :
1. $12\frac{1}{7}$ hours
2. $12\frac{2}{7}$ hours
3. $12\frac{3}{7}$ hours
4. $12\frac{4}{7}$ hours
5. None of these

Solution

The correct answer is **option 4** i.e. $12\frac{4}{7}$

Gw_____B _____A _____ Ag
   K   M   N

Since all of them have to reach Agra simultaneouslyso let sameer leave on of them at A and picks the other at B. And again let us assume distance between gwalior and B be ' K ' and BA be ' M' and A and Agra be ' N ' .

Now in the time bike covers a distance between gwalior and A and back to B the person walking reaches B . Hence

(K + M + M) ÷ K = 35 ÷ 5

[Since time taken is equal to speed is directly proportional to distance travelled]

M/K = 3/1

And again for the person and bike after A

(M + M + N) ÷ N = 35 ÷ 5

M/N = 3/1,

Hence let M = 3y , N = y , K = y

Therefore we also know that

M + N + K = 200

N = 40 = K

M = 120

Therefore total time taken will be = Time taken by bike to reach A from Gwalior + Time taken by person walking from A to Agra hence

T = (K + M) ÷ 35 + N ÷ 5 = 160 ÷ 35 + 40 ÷ 5 = $12\frac{4}{7}$