TSD ASSIGNMENT 2 (ESCALATOR)

Question1- You walk upwards on an escalator, with a speed of 1 step per second. After 50 steps you are at the end. You turn around and run downwards with a speed of 5 steps per second. After 125 steps you are back at the beginning of the escalator. How many steps do you need if the escalator stands still.

Question2- A walks down an up-escalator and counts 150 steps. B walks up the same escalator and counts 75 steps. A takes three times as many steps in a given time as B. How many steps are visible on the escalator?

Question3- Shyama and Vyom walk up an escalator (moving stairway). The escalator moves at a constant speed. Shyama takes three steps for every two of Vyom's steps. Shyama gets to the top of the escalator after having taken 25 steps, while Vyom (because his slower pace lets the escalator do a little more of the work) takes only 20 steps to reach the top. If the escalator were turned off, how many steps would they have to take to walk up? (CAT 2001)

 a. 40 b. 50 c. 60 d. 80

Question4 -A man can walk up a moving "up" escalator in 30 second. The same can walk down this moving "up" escalator in 90 seconds. Assume his walking speed is same Upwards & downwards. How much time he will take to walk up the escalator when escalator is not moving

Question5- An escalator is descending at constant speed. A walks down and takes 50 steps to reach the bottom. B runs down faster and takes 90 steps to reach the bottom.If B takes 90 steps in the same time as A takes 10 steps then how many steps are visible when the escalator is not operating?

Question6- On an upward moving escalator Amit, Sanjeev and Vicky take 10 steps, 8 steps and 5 steps respectively to reach the top. On the same upward moving escalator Amit takes 30 steps to come down from the top. Find the ratio of the time taken by Sanjeev and Vicky to reach the top.

Question7- Two sisters go up 40-step escalators. The older sister rides the up escalator, but can only take 10 steps up during the ride since it is quite crowded. The younger sister runs up the empty down escalator, arriving at the top at the same time as her sister. How many steps does the younger sister take

Question8- pavan walked up a descending escalator and took 154 steps in 100 sec to reach the top .rishabh started simultaneously from the top taking 3 steps for every 4 steps taken by pavan ,reach the bottom in 40sec .how many steps from bottom were they when they crossed each other

Ans 1- 100 Ans 2- 120 Ans 3- 50 Ans 4- 45 Ans 5 – 100 Ans 6- 7:10 Ans 7- 70 Ans 8- 22