

# **TSD ASSIGNMENT 4 (BOAT & TRAIN )**

Q1: A boat covers a distance of 16 km in 2 hours when rowing downstream and in 4 hours if rowing upstream. What is the speed of the boat in still water .

Q2. The rowing speed of a man in still water is 7.5 kmph. In a river flowing at 1.5 kmph, it takes the same boatman 50 minutes to row a certain distance and come back. Find the distance.

Q3. A boatman rows to a place 48 km distant and back in 14 hours. He finds that he can row 4 km with the stream in the same time as 3 km against the stream. Find the rate of the stream.

Q4. A man travels downstream for 5 hours and again upstream for 5 hours. Yet it is at a distance of 2 kms from the place it started. What is the speed of stream?

Q5. A man rows upstream in a river. When he covered 1 km his hat fell down and started to move downstream. The man kept swimming upstream for 5 min but realised he has dropped his hat then rows downstream to catch the hat. Finally the hat and man meet at start. Find speed of flow of river

Q6. At his usual rowing speed, Rahul can travel 12 miles downstream in a certain river in six hours less than it takes him to travel the same distance upstream. But if he could double his usual rowing speed for this 24 mile round trip, the downstream 12 miles will then take only one hour less than the up-stream 12 miles. What is the speed of the current in miles per hour?  
a.  $\frac{7}{3}$  b.  $\frac{4}{3}$  c.  $\frac{5}{3}$  d.  $\frac{8}{3}$

Q7. A boat goes 30 km upstream and 44 km downstream in 10 hours. In 13 hours, it can go 40 km upstream and 55 km down-stream. The speed of the boat in still water is: [IIFT 2008]

- 1) 3 km/hour
- 2) 4 km/hour
- 3) 8 km/hour
- 4) None of the above

Q8. A train running at 72 kmph crosses a telephone pole in 7 sec. What is the length of the train?

Q9.. A train crosses 2 platforms of length 400 m and 600 m in 6 seconds and 8 seconds respectively. What is the length of the train?

Q10. A train crosses two persons who are walking at 2 kmph and 4 kmph, in the same direction in which the train is going, in 9 and 10 seconds respectively. Find the length of the train.

Q11 A tunnel measuring 4 km and 636 meters is designed specifically for two trains to pass simultaneously in the same or opposite directions. Therefore two express trains of length 400 m each, travel through the tunnel at the rate 56 kmph and 80 kmph. Assuming that both the trains enter the tunnel at the same point of time ( $t = 0$ ) from the two different ends, then the minimum value of 't' such that both the trains have cleared the tunnel will be.

- a. 2 min 45 sec b. 2 min 24 sec  
c. 2 min 36 sec d. None of these

Q12. Two trains are travelling in opposite direction at uniform speed 60 and 50 km per hour respectively. They take 5 seconds to cross each other. If the two trains had travelled in the same direction, then a passenger sitting in the faster moving train would have overtaken the other train in 18 seconds. What are the lengths of trains (in metres)?

- 1) 112.78  
2) 97.78, 55  
3) 102.78, 50  
4) 102.78, 55

Ans 1- 6 ,Ans 2- 3 ,Ans 3- 1 ,Ans 4- 0.2 ,Ans 5- 6 km/hr

Ans 6-  $\frac{8}{3}$  ,ans 7- 8 km/hr ,Ans 8- 140 ,Ans 9- 200

Ans 10- 50 m,Ans 11- D,Ans 12- 3