Boats and Streams Questions and Answers for Bank Exams Pdf

1. A man can row upstream at 7 kmph and downstream at 10 kmph. Find man's rate in still water and the rate of current.

a. 1.5 km/hr
b. 1.8 km/hr
c. 2.1 km/hr
d. 2.7 km/hr

Ans: A

$$\text{Rate in still water} = \frac{1}{2}(10+7)\ \text{km/hr} = 8.5\ \text{km/hr.}$$

$$\text{Rate of current} = \frac{1}{2}(10-7)\ \text{km/hr} = 1.5\ \text{km/hr.}$$

2. There is a road beside a river. Two friends started from a place A, moved to a temple situated at another place B and then returned to A again. One of them moves on a cycle at a speed of 12 km/hr, while the other sails on a boat at a speed of 10 km/hr. If the river flows at the speed of 4 km/hr, which of the two friends will return to place A first?

Clearly, the cyclist moves both ways at a speed of 12 km/hr.
So, average speed of the cyclist = 12 km/hr.
The boat sailor moves downstream @ (10 + 4) *i.e.*, 14 km/hr and upstream (10 − 4) *i.e.*, 6 km/hr.

$$\text{So, average speed of the boat sailor} = \left(\frac{2\times 14\times 6}{14+6}\right)\text{km/hr}$$

$$= \frac{42}{5}\ \text{km/hr} = 8.4\ \text{km/hr.}$$

Since the average speed of the cyclist is greater, he will return to A first.

3. The speed of a boat when travelling downstream is 32 km/hr, whereas when travelling upstream it is 28 km/hr, what is the speed of the boat in still water and at the speed of the stream?

a. 2 km/hr
b. 3 km/hr

c. 4 km/hr
d. 5 km/hr

Ans: A

. Speed of boat in still water = $\frac{1}{2}(32+28)$ km/hr = 30 km/hr.

Speed of stream = $\frac{1}{2}(32-28)$ km/hr = 2 km/hr.

4. A Boat goes 8 km in one hour along the stream and 2 km in one hour against the stream. The speed in km/hr of the stream is
   a. 2
   b. 3
   c. 4
   d. 5

   Ans: B

   Speed of the stream = $\frac{1}{2}(8-2)$ km/hr = 3 km/hr.

5. A boatman rows 1 km in 5 minutes, along the stream and 6 km in 1 hour against the stream. The speed of the stream is

a. 3 kmph

b. 6 kmph

c. 10 kmph

d. 12 kmph

Ans: A

Rate downstream = $\left(\frac{1}{5}\times 60\right)$kmph = 12 kmph;

Rate upstream = 6 kmph.

Speed of the stream = $\frac{1}{2}(12-6)$ kmph = 3 kmph.