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# DI table Chart Questions for SBI Clerk Mains, IBPS Clerk Mains, RBI Assistant Mains, LIC AAO, SBI PO Pre, IBPS PO Pre and RRB Scale I Pre Exams.

## DI Table Chart No. 103

**Directions:** Study the following table chart carefully and answer the questions given beside.

Two rivers X and Y flowing in the same direction met at a point C and new river Z is created. After that Z is also flowing in the same direction. In river X, the distance between point A and C is 24 km and in river Y, the distance between B and C is 18 km. D is a point somewhere in river Z. The speed of the stream in all three rivers is equal. The river flows downstream from point A to point C and point B to point C.

The following table shows the swimming speed (in km/hr) of 5 swimmers in still water.



Swimmer	Speed (in km/hr)
Michael Phelps	8
Sun Yang	5
David Nolan	6
Grant Hackett	4
Adam Peaty	10

- The masks received by A from Ajmer is what percent of the masks received by B from Bhilwara?**  
A. 27.5%      B. 25%      C. 35%      D. 33%      E. 32.5%
- What is the average number of masks received by B from Surat and Ajmer?**  
A. 4482      B. 4223      C. 4536      D. 4584      E. 4566
- What is the difference between the masks received by A and B together from Varanasi and Bhilwara?**  
A. 5600      B. 4200      C. 5240      D. 5800      E. 5400
- What is the ratio of the total number of masks received by C from Surat and Ajmer to that received by B and C from Jaipur?**  
A. 97 : 190      B. 82 : 185      C. 17 : 52      D. 32 : 85      E. None of these

5. Adam Peaty starts swimming from A towards D. At the same time, a boat starts travelling towards point B from D. The time duration that Adam Peaty took to reach point was equal to the time the boat took to finish its trip. Find what could be the minimum speed of the boat. Speed of the stream was 2 kmph.

A. 10 kmph

B. 11 kmph

C. 13 kmph

D. 15 kmph

E. 18 kmph

**Correct Answers:**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
E	A	D	A	B



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## Explanations :

1. The distance needs to be covered by Michael Phelps to reach point C = 24 km

The distance needs to be covered by David Nolan to reach point C = 18 km

The speed of stream is 4 km/hr.

Speed of Michael Phelps in still water = 8 km/hr.

Speed of David Nolan in still water = 6 km/hr

It is clear that both of them are moving in downstream.

Time required to reach C point by Michael Phelps

$$= \frac{24}{8 + 4} \text{ hrs.} = 2 \text{ hrs}$$

Time required to reach C point by David Nolan =  $\frac{18}{6 + 4}$  hrs. = 1.8 hrs

∴ The required time = (2 - 1.8) hrs = 0.2 hrs = 12 minutes

Hence, option E is correct.

2. The distance needs to be covered by Grant Hackett to reach point C from A = 24 km

The distance needs to be covered by Grant Hackett to reach point B from C = 18 km

Speed of stream = 2 km/hr.

Speed of Grant Hackett in still water = 4 km/hr.

It is clear that the journey from point C to B is in upstream and from A to C is in downstream.

∴ The time required to reach point C from A

$$= \frac{24}{4 + 2} \text{ hrs.} = 4 \text{ hrs}$$

And, the time required to reach point B from C =  $\frac{18}{4 - 2}$  hrs. = 9 hrs

∴ The total time required finish the journey = (4 + 9) hrs. = 13 hrs.

Hence, option A is correct.

3. The distance needs to cover by Michael Phelps to reach point C from A = 24 km  
Let the speed of the stream be  $x$  km/hr.  
Speed of Michael Phelps in still water = 8 km/hr.  
6 hours and 24 minutes = 6.4 hours.  
It is clear that the journey from point A to C is in downstream and from C to A is in upstream.

∴ We can write now,

$$\Rightarrow \frac{24}{8+x} + \frac{24}{8-x} = 6.4$$

$$\Rightarrow (8-x) + (8+x) = \frac{4}{15} (8^2 - x^2)$$

$$\Rightarrow 16 = \frac{4}{15} (64 - x^2)$$

$$\Rightarrow 256 - 4x^2 = 240$$

$$\Rightarrow 4x^2 = 16$$

$$\Rightarrow x = \sqrt{4}$$

$$\Rightarrow x = 2$$

∴ The speed of the stream = 2 km/hr.

∴ The required ratio =  $8 : 2 = 4 : 1$ .

Hence, option D is correct.

4. Let the distance between points C and D is =  $x$  km.  
The distance needs to be covered by Sun Yang to reach point A from C = 24 k  
The distance needs to be covered by Sun Yang to reach point A from D =  $(24 + x)$  km  
Speed of stream = 3 km/hr.  
Speed of Sun Yang in still water = 5 km/hr.  
It is clear that the journey from point D to A is in upstream.  
He finishes his journey in 25 hrs.  
∴ We can write now,

$$\frac{x+24}{5-3} = 25$$

$$\Rightarrow x+24 = 50$$

$$\Rightarrow x = 50 - 24$$

$$\Rightarrow x = 26$$

∴ The distance between points C and D = 26 km.

Hence, option A is correct.

5. Let the speed of the boat was  $v$  kmph, and the distance between the points C and D was  $CD$  km.

Since both took equal time, we have

$$\frac{24 + CD}{10 + 2} = \frac{CD + 18}{v - 2}$$

on simplifying, we get

$$v = \frac{264 + 14 CD}{24 + CD} \text{ --- (i)}$$

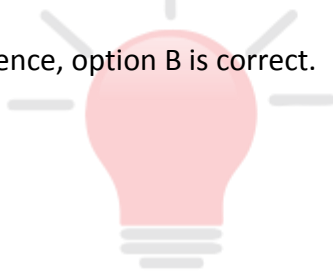
We need to find the minimum speed of the boat, that is minimum value of 'v'.

Expression of the left hand side will be minimum only when  $CD$  will be minimum as you can verify by putting  $CD = 0, 1, 10, 20$ , etc.

so to get minimum value for  $v$ ,  $CD = 0$ , therefore

$$v = \frac{264}{24} = 11 \text{ kmph}$$

Hence, option B is correct.



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