ANALOGY LEVEL 1

When you draw an analogy between two things we compare them for the purpose of explanation. If a scientist says that earth's forest functions as human lungs then we instantly draw an explanation that both lungs and trees intake important elements from air. As far as SSC exam is concerned this is one of the trickiest section. We intend to comprehend it by solving as many different types of questions as is asked in papers. Presently in the level 1 exam a good aspirant must be able to solve at least 7 out of 10 questions given.

In each of the following questions, select the related word/number from the given alternative:

1. Flow : River :: Stagnant : ?

A. Rain B. Stream C. Pool D. Canal

2. Ornithologist : Bird :: Archaeologist : ?

A. Islands B. Mediators C. Archaeology D. Aquatic

3. Peacock : India :: Bear : ?

A. Australia B. America C. Russia D. England

4. Given set: (3,7,15)

A. 2,6,10 B. 4,8,18 C. 5,9,17 D. 7,12,19

5. Given set: (63,49,35)

A. 81,63,45 B. 64,40,28 C. 72,40,24 D. 72,48,24

6. 3 : 243 :: 5 : ?

A. 405 B. 465 C. 3125 D. 546

7. 5 : 36 :: 6 : ?

A. 48 B. 50 C. 49 D. 56

8. TALE : LATE :: ? : CAFE

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A. FACE B. CAEF C. CAFA D. FEAC

9. AZBY : DWEV :: HSIR : ?
A. JQKO B. KPOL C. KPLO D. KOLP

10. DE : 45 :: BC : ?
A. 34 B. 23 C. 56 D. 43

SOLUTION TO ANALOGY LEVEL 1

1. Answer: Option C
Explanation: As Water of a River flows similarly water of Pool is Stagnant.
Answer & Explanation

2. Answer: Option C
Explanation: As Ornithologist is a specialist of Birds similarly Archaeologist is a specialist of Archaeology.

3. Answer: Option C
Explanation: As Peacock is the national bird of India, similarly Bear is the national animal of Russia.

4. Ans. Option C
Explanation: 1st number+4 = 2nd number
2nd number+8= 3rd number

5. Ans. Option A
Explanation: 63= 7*9
49= 7*7

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35= 7*5

6. Ans. Option C
Explanation: 3^5=243
5^5=3125

7. Ans. Option A
Explanation: 13^2+13=182
18^2+18=342
19^2+19=380

8. Ans. Option A
Explanation: The first and the third letters has been interchanged

9. Ans. Option C
Explanation: Pairs of opposite letter
A&Z, B&Y, similarly H&S, I&R, K&P, L&O

10. Ans. Option B
Explanation: D=4, E=5, similarly B=2, C=3

BOAT AND STREAM

Boat and stream problems is a sub-set of time, speed and distance type questions where in relative speed takes the foremost role. We always find several questions related to the above concept in SSC common graduate level exam as well as in bank PO exam. Upon listing the brief theory of the issue below we move to the various kinds of problems asked in the competitive examination.

Important Formulas - Boats and Streams

- **Downstream**
  In running/moving water, the direction along the stream is called downstream.
- **Upstream**
  In running/moving water, the direction against the stream is called upstream.

- Let the speed of a boat in still water be u km/hr and the speed of the stream be v km/hr, then

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Speed downstream = (u+v) km/hr
Speed upstream = (u - v) km/hr

- Let the speed downstream be a km/hr and the speed upstream be b km/hr, then

  Speed in still water =1/2*(*a*+*b*)km/hr
  Rate of stream = 1/2*(*a*−*b*) km/hr

Some more short-cut methods

- Assume that a man can row at the speed of *x* km/hr in still water and he rows the same distance up and down in a stream which flows at a rate of *y* km/hr. Then his average speed throughout the journey

  = (Speed downstream × Speed upstream)/Speed in still water=((*x*+*y*)(*x*−*y*))/*x* km/hr

- Let the speed of a man in still water be x km/hr and the speed of a stream be y km/hr. If he takes t hours more in upstream than to go downstream for the same distance, the distance

  = ((*x** *x* −*y** *y*)**t*)/2*y* km

- A man rows a certain distance downstream in t_1 hours and returns the same distance upstream in t_2 hours. If the speed of the stream is y km/hr, then the speed of the man in still water

  =*y*((*t*2+*t*1) / (*t*2−*t*1)) km/hr

- A man can row a boat in still water at x km/hr. In a stream flowing at y km/hr, if it takes him t hours to row a place and come back, then the distance between the two places

  =*t*((*x** *x* −*y** *y*))/2*x* km

- A man takes n times as long to row upstream as to row downstream the river. If the speed of the man is x km/hr and the speed of the stream is y km/hr, then

  x=*y**((*n*+1)/(*n*−1))

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Solved Examples

Level 1

1. A man's speed with the current is 15 km/hr and the speed of the current is 2.5 km/hr. The man's speed against the current is:

A. 8.5 km/hr
B. 10 km/hr.
C. 12.5 km/hr
D. 9 km/hr

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Answer : Option B

Explanation :

Man's speed with the current = 15 km/hr

=>speed of the man + speed of the current = 15 km/hr

speed of the current is 2.5 km/hr

Hence, speed of the man = 15 - 2.5 = 12.5 km/hr

man's speed against the current = speed of the man - speed of the current

= 12.5 - 2.5 = 10 km/hr

2. In one hour, a boat goes 14 km/hr along the stream and 8 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

A. 12 km/hr
B. 11 km/hr
C. 10 km/hr
D. 8 km/hr

Answer : Option B

Explanation :

Let the speed downstream be a km/hr and the speed upstream be b km/hr, then

Speed in still water =1/2(a+b) km/hr and Rate of stream =1/2(a−b) km/hr
Speed in still water = 1/2(14+8) kmph = 11 kmph.

3. A boatman goes 2 km against the current of the stream in 2 hour and goes 1 km along the current in 20 minutes. How long will it take to go 5 km in stationary water?

A. 2 hr 30 min
B. 2 hr
C. 4 hr
D. 1 hr 15 min

Answer : Option A

Explanation :

Speed upstream = 2/2=1 km/hr

Speed downstream = 1/(20/60)=3 km/hr

Speed in still water = 1/2(3+1)=2 km/hr

Time taken to travel 5 km in still water = 5/2= 2 hour 30 minutes

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