## LOGICAL THINKING - SOLUTION



#### **HSEM1BTECHSTANDARD0719**

### **& THINKING SKILL**

#### **SESSION - 1**

#### & PROBLEM SOLVING

- 1. He is too short to reach the "10" button. But when others are with him, he can ask them to push the button for  $10^{\rm th}$  floor. On a rainy day, he has an umbrella, so he can press the button using that.
- Ask any guard "What would the other guard say if I ask which way is to the hell?"
  - And whatever answer he give is the way to the heaven.
  - If you end up asking the question to the truthful one, he will speak the truth and he knows that other guard is going to lie so he will show the way to the heaven.
  - If you end up asking the question to the liar, he will lie about the other and the answer will be the way to the heaven.
- 3. The hat is white. If Tom doesn't know his hat color then the other two men's hats cannot be both black otherwise he would know his is white. When Tim doesn't know his hat color either, that means Jim's hat could not be black otherwise Tim would have to know his hat was white to fulfill the information discovered through Tom's answer.
- 4. Never, with rising water level boat also rises.
  - Never the boat floats on water.
- 5. Let's take a scenario. Suppose you pick from jar labelled as Apple and Oranges and you got Apple from it. That means that jar should be Apple as it is incorrectly labelled. So it has to be Apple jar.
  - Now the jar labelled Oranges has to be Mixed as it cannot be the Oranges jar as they are wrongly labelled and the jar labelled Apple has to be Oranges.
  - Similar scenario applies if it's a Oranges taken out from the jar labelled as Apple and Oranges. So you need to pick just one fruit from the jar labelled as Apple and Oranges to correctly label the jars.

#### ALTERNATIVE SOLUTION:

We know that every jar has wrong label on it, now we know that "apple and orange" label jar is either apple or orange, so we will pick one fruit let suppose this fruit is an apple so the label of this jar should be "apple", so now "apple and orange" jar is now —-> "apple" jar then jar which labeled orange is "apple and orange" because we know that this jar has wrong label and we have already find the "apple" jar. so now orange jar is "apple and orange" jar and obviously "apple" jar is "apple and orange" jar.

- 6. Set your timer to 17 minutes. Young boy and young girl will go to the other side of bridge with the lantern first and time taken by them will be 2 minutes, the boy will return in one minute, with the lantern to senior scientist and his son, now the remaining time would be 14 minutes and will handle the lantern to the scientist's son, now the senior scientist and his son will cross the bridge together in 10 minutes, remaining time would be 4 minutes now. The young girl goes back to the boy in two minutes with the lantern and they crossed the bridge together in 2 minutes and they are safe now. In rest of one minute, they disconnected the bridge so that the demons could not reach them.
- 7. The young lady said that she thought it was her room but she knocked the door, this made Mr. Bond to doubt on her. No person will knock their own room door.
- 8. He can't reveal the number because if the product of two numbers is 20 it can have two possibilities of 4\*5 and 10\*2. Only the product of two prime numbers cannot have possibilities, say for example 3 is a prime number and 1\*3 can only give 3 and we have only 25 prime numbers. Sum of all prime numbers are almost same except the sum of 13 and 4 which is 17 and is unique. So the passcode is 13 and 4.
- 9. Send the box with the lock to B.B can't open it, but can put another lock on the box.B sends this box with the 2 locks back to A, A unlock his lock and send it back to B again.So there is just B's lock on the box and B can now open it.
- 10. Newspaper are opened in even odd sequence & not vice versa. In the FIR it was mentioned as 9-10.
- 11. The payments should equal the receipts. It does not make sense to add what was paid by the men (\$12) to what was received from that payment by the waiter (\$2) Although the initial bill was \$15 dollars, one of the five dollar notes gets changed into five ones. The total the three men ultimately paid is \$12, as they get three ones back. So from the \$12 the men paid, the owner receives \$10 and the waiter receives the \$2 difference. \$15 \$3

= \$10 + \$2.

12. Pour the four gallon bucket filled with water into the empty seven gallon bucket. Fill the four gallon bucket up again and poor as much as you can into the seven gallon bucket until the seven gallon bucket is fill. Now there is one gallon left in the four gallon bucket. Empty the seven gallon bucket and transfer the one gallon of water into the seven gallon bucket. Fill the four gallon bucket one more time, then pour the four gallons into the seven gallon bucket making which already has one gallon in it, making a total of five gallons.

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## 13. White. The cook only ever removes the white beans two at a time, and there are an odd number of them. When the cook gets to the last white bean, and picks it up along with a black bean, the white one always goes back into the pot.

- 14. Two half-full barrels are dumped into one of the empty barrels. Two more half-full barrels are dumped into another one of the empty barrels. This results in nine full barrels, three half-full barrels, and nine empty barrels. Each son gets three full barrels, one half-full barrel, and three empty barrels.
- 15. The smallest number of coconuts there could have been in the original pile is 3121.

Time	Starting	Pile =	Monkey	+	Share	+ New	Pile
						4	-12-/-
1	3121	=	1	+	624	+	2496
2	2496	=	1	+	499	+	1996
3	1996	=	1	+	399	+	1596
4	1596	<del>-</del>	1	+	319	+	1276
5	1276	<b>/</b> =	1	+	255	+	1020
6	1020		0	+	204	+	816

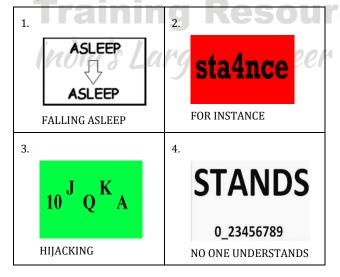
The 3,121 coconuts would be divided as follows:

the monkey would get	5 coconuts		
the first man would get	828 coconuts		
the second man would get	703 coconuts		
the third man would get	603 coconuts		
the fourth man would get	523 coconuts		
the fifth man would get	59 coconuts		

# THINKING SKILL SESSION - 2

### **& REBUS PUZZLES**

Can you solve these Rebus Puzzles?



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