## ⬆ toppr.com

presents

# Techn🦉thlon
### the international school championship
#### .....Inspiring Young minds!

**Event Partner**
**J&K Bank**
Serving to Empower

## HAUT SQUAD

# Team Details

### Name of the participants

Time: **2hrs 30min**
Maximum marks: **129**
Minimum marks: **-29**

1. _____

2. _____

Roll No.: _____

School Name: _____

# INSTRUCTIONS

## (Please read this section carefully)

### General Instructions

1. Fill the Team Details in the space provided, before starting to attempt the paper.
2. Verify that the question paper contains 28 pages and 24 Questions and 5 Technofin Question( which are not compulsury and do not carry any marks for Technothlon Prelims). The instructions for TechnoFin are present on page no.18.
3. All the answers must be marked in the OMR provided separately which has to be submitted at the end of 2hr 30 min from the start of examination.
4. The question paper can be taken back home.
5. All answers must be clear and legible. In case of any ambiguity, the decision of evaluator is final.
6. No queries regarding the correctness of the questions shall be entertained.
7. Blank papers, clipboards, log tables, slide rulers, calculators, cellular phones, pagers and any other electronic gadgets are not allowed.
8. No additional sheets will be provided for rough work.

### Selection Criteria and Result

1. The ranking will be based on the total marks obtained in all the sections.
2. The result will be declared on or before August 10, 2016 on our website technothlon.techniche.org
   To check your result, login with roll number and password provided in your admit card.
3. The top 50 teams will be invited to IIT Guwahati for the Mains and will be awarded Gold certificates. The next 200 will be awarded Silver certificates.

### OMR Instructions

1. DO NOT TAMPER WITH THE OMR.
2. Darken the bubbles properly with BLACK ball point pen only.
3. Fill all the details in the OMR sheet properly.
4. Follow the correct method as shown in the figure to fill in the OMR Sheet.

| | Wrong | | | |
|---|---|---|---|---|
| 1. | ⊘ | ◯ | ◯ | ◯ |
| 2. | ◯ | ⊘ | ◯ | ◯ |
| 3. | ◯ | ⬤ | ◯ | ◯ |
| 4. | ◯ | ⬤ | ⬤ | ◯ |
| | Correct | | | |
| 1. | ◯ | ⬤ | ◯ | ◯ |

# MARKING SCHEME

## (Please read this section carefully)

***Climb and fall scheme :***
*This scheme consists of 6 types of marking schemes. You start with the type 1 marking scheme. As and when you answer the question correctly, you automatically move on to the type 2 marking scheme and so on. However, if you break the sequence and attempt the question wrongly, you again start from the type 1 sequence and move henceforth.*

> *Type 1: (+2 , 0)*
> *Type 2: (+3 ,-1)*
> *Type 3: (+4 ,-2)*
> *Type 4: (+5 ,-3)*
> *Type 5: (+6 ,-4)*
> *Type 6: (+7 ,-5)*

***Full or Nil :***
*Unless and until you answer all the questions of the section correctly, you cannot score in that section i.e., if you solve all questions in a section correctly then, you will be getting Maximum marks which is shown on top of the section.*

***Lazy Caterer's Sequence :***
*It describes the maximum number of pieces of a circle that can be made with a given number of straight cuts.*
*For example, three cuts across a pancake will produce six pieces if the cuts all meet at a common point inside the circle, but up to seven if they do not.*
*Let the $n^{th}$ term in the sequence be $X_n$. $X_n = ( n^2 + n +2)/2$ for $n > 0$  and  $X_0 = 0$.*
*In a section, if you solve n questions correctly and m questions incorrect , then marks you get $= X_{2n} - X_m$*

***Boomerang scheme:***
*If a question is solved correctly , you will be awarded 3 marks. If you do not attempt it, then Zero, otherwise, if attempted wrong , then -3.*

Technothlon
the international school championship
.....Inspiring Young minds!

3

Techniche
The annual Techno-Management Festival
*IIT Guwahati | 1st - 4th September 2016*

# THE ISLAND

*Marking Scheme : Lazy Caterer's Sequence*

As the leader of his island, Tintin has decided to take matters into his own hands and rebel against the king.

**Question 1 :**
Before leaving, he wants to test whether his friend Captain Haddock is wise enough. So he places three boxes A,B,C contain initially 0, 0, 27 balls respectively. He tells that he wants equality among the boxes, and at every $i^{th}$ move you make, you must transfer exactly i balls from one box to another. And you cannot transfer balls between A and B. How many minimum steps( If possible) will Captain take to get to equal number of balls in each box?

(a) 7                                  (b) 9
(c) 8                                  (d) Not possible

**Question 2 :**
Walking along, Tintin overheard the two island gate guards, Thomson and Thompson chatting amongst themselves.

    Thomson    : He told us we have consecutive letters on our papers
    Thompson : Yeah he told me too.
    Thomson    : I don't know what your letter is.
    Thompson :  Neither do I know your letter.
    Thomson    :  Now I know.

Tintin listened this conversation and wondered what the two letters could be. When he was about to leave the island, Thomson stopped him and told him to say the password, which were the two letters.

Maximum of  how many attempts does Tintin need to make to have the correct pair of letters, and thus pass successfully?

(a)1                                   (b)2
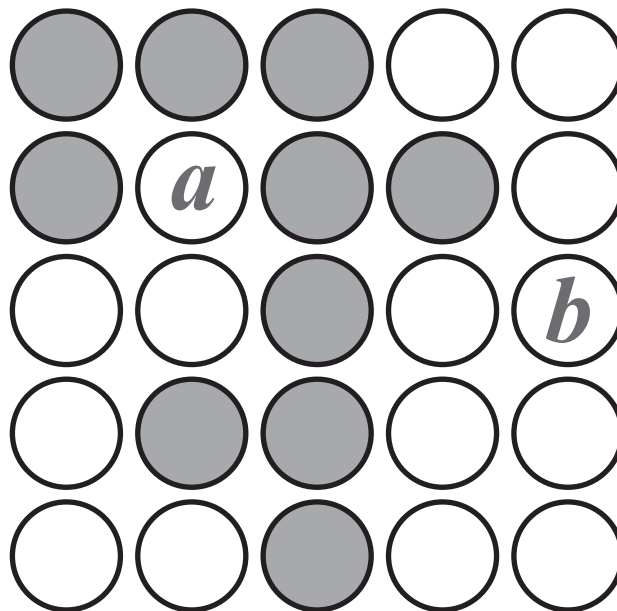(c)4                                   (d)More than 4

**Question 3 :**

*After leaving his island, Tintin seeked the help of the great scientist Dr. Calculus who stayed in his research island. When he landed on the island, he notices a map of 25 labs, aligned in a 5x5 pattern, of which a few labs were burned(Coloured in figure). Only 15 labs numbered from #1 to #15 are not burnt. He noticed the map, but realised that the lab numbers were missing from it. Instead, an instruction read "The distance from lab #1 to lab #2 will be less than the distance from lab #2 to lab#3, which is less than the distance from lab #3 to lab #4, and so on". Also, only the intact labs were numbered. Find out the value of a+b (where a and b are the lab numbers).*

*Note : Distance is calculated from the centre of one lab to the centre of another.*



(a)10                      (b)12

(c)14                      (d)16

Technothlon
the international school championship
.....Inspiring Young minds!

5

Techniche
The annual Techno-Management Festival
IIT Guwahati | 1st - 4th September 2016

# AL CAPONE'S ISLAND

*Marking Scheme : Lazy Caterer's Sequence*

After coming out of his town, Tintin goes to Al Capone's to gather more followers to assist him in his revolution.

## Question 4:

Al Capone and his (n-1) friends are sitting in a circular fashion when Tintin meets him(Total of n people). Each of them owns a coin. First person passes 1 coin to the person sitting on his left side. The second person in turn passes 2 coins to the person sitting on the left. Third person passes 1 coin to the left, 4th passes 2 coin to his left and so on. So each person receiving 1 coin from the right has to pass 2 coins to the left. Similarly, a person receiving 2 coins from the right has to pass 1 coin to the left. If at any point of time, a person runs out of coin he is thrown out of the game.

The game will terminate if at the end only 1 person is left with all the coins in his possession. There might be values of n where the game may not terminate e.g. 3 persons left with 4 4 4 coins respectively.

For how many different values of n from 4 to 100 does the game terminate?

(a) 16   (b) 7

(c) 10   (d) 46

## Question 5:

Al Capone loved balances. He took Tintin to his famous room of Balance; where there was present a huge complex balance as shown in the fig_1. The marks on the stick are at 1 metre distance each and the white small circles represent the point around which the stick is hinged. There are 12 identical looking weights which weigh 1kg, 2kg, 3kg,..... upto 12kg. He asked Tintin to identify the weight of each of the weights given that the system is balanced. Tintin identified 9 of them correctly except the encircled ones, can you help him find the rest by telling the sum of the weights of the encircled ones?

For balancing the total system all the sticks that hold the weights need to be balanced in themselves. For each of the sticks being balanced the following condition need to be satisfied –
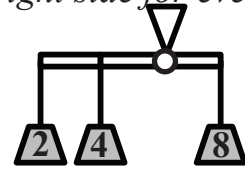
*BALANCING of TORQUE : The sum of the products of weight with distance from the hinge on the left side of the hinge should be equal to that on the right side for every rod.*
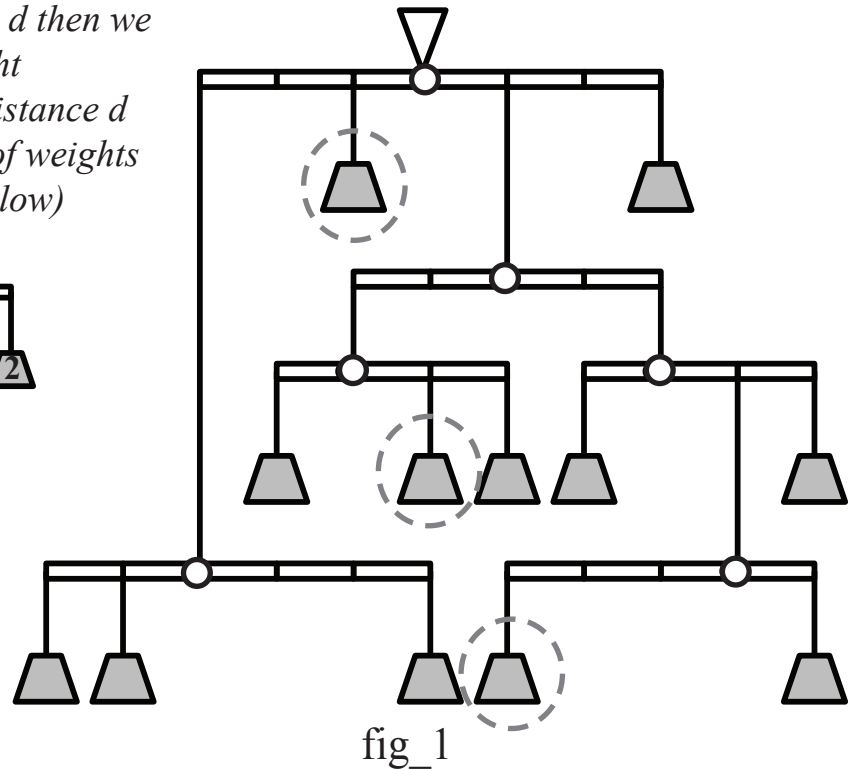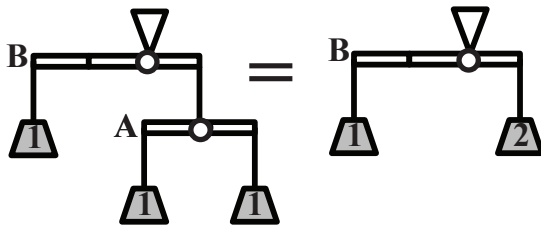*Eg. In the system shown beside*
*Torque on the left side=(4kg)x(1m)+(2kg)x(2m)=8 kg-m*
*Torque on the right side=(8kg)x(1m)=8 kg-m*



*Also if a stick A is connected below another stick B directly at a given distance d then we can consider the stick A as a weight connected to stick B at the same distance d whose weight is equal to the sum of weights connected to stick A. (as shown below)*





fig_1

(a) 17          (b) 18          (c) 19          (d) 20

## Question 6 :

*Realising he needs money, Tintin reaches inside the bank situated on the island, and sees a row of lockers which start with 0 and go on till infinity. A locker can contain any number of coins. A coin is placed in the locker with index 7 (i.e. the 8th square). The aim is to move this coin to the locker with index 1. (i.e. the 2nd square) and all other squares empty. There are two rules to this:*

*1) Fission Rule: A coin may be replaced by a pair of coins by placing one in each of the immediately adjacent squares.*

*Eg. Coin #3 can be replaced by Coin#2 and Coin#4 where Coin#(number) represents coin in position with index number.*

*2) Fusion Rule: A pair of coins separated by exactly one intervening square can be replaced by a single coin in that middle square.*

*Eg. Coin#2 and Coin#4 can be replaced by Coin#3.*
*Minimum number of moves required to achieve our aim ?*

(a) 18     (b) 19     (c) 17     (d) 16

# THE ROUGH SEA

*Marking Scheme : Integer Marking*
*Climb and Fall*
*Scheme*

**\* Answers of following 6 questions are Integers(Double Digit).You need to bubble the numbers in the OMR .For eg : Bubble 08 if the answer is 8 and Bubble 44 is the answer is 44.**

### Question 7 :

*Few distance into the rough sea, they decide to call it a day. Tintin and five of his comrades decide to take turns in controlling their ship. In each 'sitting', some of them sleep while the others control the ship. How many such 'sittings' are needed so that every person has a chance to control the ship to every other person sleeping?*

### Question 8 :

*Another band of loyalist join them in the morning, taking the total to 60 followers. For breakfast, they decide to have bamboo sticks. Unfortunately, he has only 47 bamboo sticks, all of them identical cylinders. Anxious to evenly distribute the 47 sticks amongst themselves, Tintin decides to cut the sticks with his sword. What is the minimum number of times that Tintin has to use his sword to share the 47 bamboo sticks between all 60 of them, knowing that each of them must receive identical parts.*
*Note : A sword can be used to break mutliple sticks at a time.*

### Question 9 :

*As they were moving through the jungle, they met an old drunkard who insisted everyone should to swap their hats. The troop contains 64 people. In order to save time, each pair within the troop swaps hat with each other only once (i.e. no swapping is repeated). After a round of madness, Tintin notices that it is no longer possible to return all hats to their respective owners through more swappings. To sensibly resolve this maddening confusion, he decides to bring in even more hat-wearing guests in his troop, to allow for even more hat swappings. How many extra guests are needed to return all hats (including the extra ones) to their rightful owners?*
*Note : Assume a person has exactly one mushroom.*

## Question 10 :

When they are walking, one of the men, Sharktooth, in the troop is planning something against Tintin, and walks up to him saying that he does not believe Tintin is smart enough to lead them, so he throws up a challenge for him.

He places 2 boxes, one having 15 apples and the other having 12 apples, he tells Tintin that either he can eat equal number of apples from both boxes or any number of apples from any of the boxes. He says that whoever eats the last apple will be their leader, and tells Tintin to make his choice first. How many apples will Tintin eat in his first move to win?

## Question 11 :

Still not satisfied and willing to give up, Sultan now brings up 9 jars filled with 4, 2, 6, 7, 3, 4, 5, 8 and 3 bananas respectively. In one minute Tintin can either double the content of one jar, or eat one banana from each jar, and gives him a time limit of 90 minutes. Can Tintin empty all the jars using these moves in the given time? If yes, then give the minimum time required by him (in minutes) to empty the jars? Answer 00 if it is not possible.

## Question 12 :

In the night, Tintin is informed that in one particular row of 10 tents a magical elf has entered and stealing the food from the tents. Each minute, the elf moves to an adjacent tent. Tintin must find the elf as soon as possible. But the problem is, he can search one tent in a minute. What is the minimum time in which Tintin can catch the elf in any case?

# THE INSIDER'S INFORMATION

*Marking Scheme : Full or Nil with*
*maximum of 6*

As they proceed towards the castle, Tintin informs his fellow rebels that his spy has infiltrated in the castle and would be sending different encoded information that might be of help to them.

**Question 13 :**
The spy sent Tintin four messages which consists of only the letters from A to D, that are encoded in the following way:
A, B, C, D are equivalent to 00, 01, 10, 11 respectively.
An operation ‡ is defined over the numbers 0 and 1 as

| ‡ | 0 | 1 |
|---|---|---|
| 0 | 0 | 1 |
| 1 | 1 | 0 |

eg. 1‡1=0.
further A‡B=00‡01=(0‡0)(0‡1)=01=B

All messages that Tintin receives are encoded as (Message)‡(Key) where Key is a fixed word that is used for encoding all the Messages. But, sadly, Tintin does not know the key.
    BDBDBD,   AAAA,   BDBBBB,   DAACCC .
You forgot the messages corresponding to these encodings but you do remember that all of these four messages had ADC as its substring.
Few seconds later, Tintin receives another message that was encoded as BBDBD. Can you tell what the actual message could possibly be?
Not clear? Want an example – let us have two messages AB and CD, and let the key be BC, then

  A B        C D
‡B C       ‡B C
 ̄ ̄ ̄ ̄        ̄ ̄ ̄ ̄
 B D        D B    are the corresponding cypher texts.

[Hint: if (word1)‡(word2)=(word3) then (word1)=(word2)‡(word3)]

    (a)ABACD        (b)ABADC        (c)ABABC        (d)ABBDC

Technothlon
the international school championship
.....Inspiring Young minds!

10

Techniche
The annual Techno-Management Festival
IIT Guwahati | 1st - 4th September 2016

# RASTAPOPOULOS'S ISLAND

*Marking Scheme : Boomerang Scheme*



**Question 14 :**

Tintin reaches Rastapopoulos's island, but they are informed he has moved out, and the situation is pretty explosive there. Alonso, Bianca, and Coco are running for the post of the island head. On the ballot, each voter lists the three candidates in order of their preference. Counting only the first preferences results, dramatically, in a three-way tie. To break the deadlock, the second preferences are counted, but again there is a three-way tie. Alonso notes that, since the number of voters is odd, they can make two-way decisions without ties. He proposes that the voters first choose between Bianca and Coco, then the winner faces Alonso for the position. Bianca thinks it's a good resolution, since they only want to identify the winner, not the runner-up. Coco disagrees and complains that this is giving Alonso an advantage. Who is right? Assuming the voters never change their preferences, what is Alonso's chance of winning under his proposed voting system?

    (a) Alonso                      (b) Coco
    (c) Both are wrong       (d) None of these
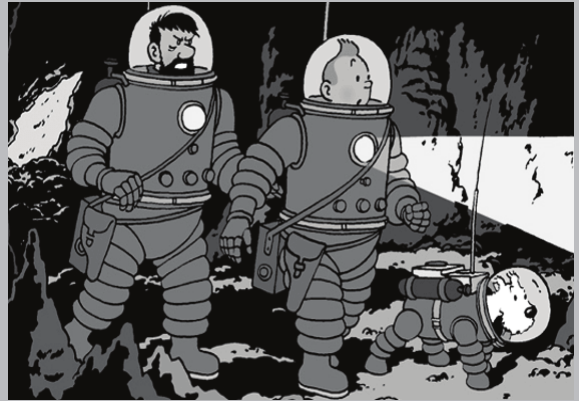
**Question 15 :**

While in Rastapopolous's Island, Tintin notices many corrupt practices being held there, one of them being gambling. He decides to bring an end to it and walks up to The Trickler, the self-proclaimed biggest gambler of the island. After an angry conversation with him, they decide if Tintin beats him, he would stop gambling forever.

They decide to play a game. The Trickler controls three 'rat' pieces, while Tintin controls a single 'snake' piece. Initially, all four pieces are placed somewhere on a two-dimensional plane. They take turns making moves, with The Trickler going first. Each move, a player is allowed to move one of her pieces a distance of at most one unit along the straight line. Tintin wins if his 'snake' piece can catch one of the rabbit pieces.

    (a) Yes                        (b) No
    (c) Depends on Position      (d) None of these

Technothlon
the international school championship
.....Inspiring Young minds!

Techniche
The annual Techno-Management Festival
IIT Guwahati | 1st - 4th September 2016

# THE DARK CAVE



*Marking Scheme : Lazy Caterer's Sequence*

They landed offshore on the king's island and noticed a huge cave. They entered it. It was dark and moving inside it was difficult

**Question 16 :**
As they were walking, they encountered 49 lamps set in a circle, and found a tool that can toggle the state (on/off) of any set of 5 consecutive lamps. Tintin has to apply this tool several times to toggle the state of a single lamp. What are the possible no. of times Tintin would have to use this tool to achieve this?

> (a) 25
> (b) 32
> (c) 40
> (d) 49

**Question 17 :**
Now suppose that the tool can toggle 15 consecutive lamps then with how many lamps can Tintin achieve the same?

> (a) 53
> (b) 54
> (c) 55
> (d) none of these

Technothlon
the international school championship
.....Inspiring Young minds!

Techniche
The annual Techno-Management Festival
IIT Guwahati | 1st - 4th September 2016

# RASTAPOPOULOS'S ARMY CAMP

*Marking Scheme : Lazy Caterer's Sequence*

*Tintin has reached the outskirts of the castle where they meet Rastapopoulos's army, also ready to revolt. However, the electricity supply there had been cut.*

## Question 18:

*A soldier comes to Tintin with a foldable conductor that has 12 segments and 11 joints, which he has to use to connect the battery to the water pump. The joints can be only at a position such that the corresponding segments are allowed to be only at an angle 90 degrees to each other – right or left. Assuming that the first joint is towards the right(with respect to the first segment), and any overlapping will cause a short circuit, what is the number of 'safe' orientations of the foldable conductor?*
*(As you can see in the figure the given orientation is a correct one.)*
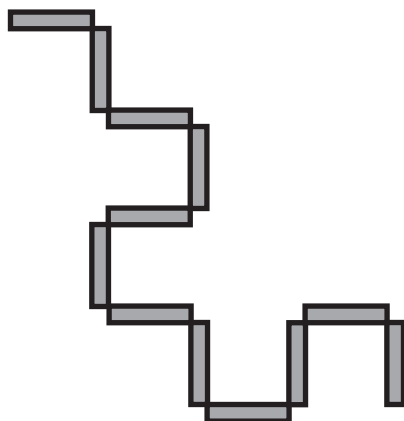


a) 142          b) 143          c) 144          d) 145

## Question 19:

*Rastapopoulos had announced that it would issue six-digit identity numbers to all his soldiers using numbers 0 through 9. If each number has to differ from every other number in at least two places. What is the highest population the island can have?*

a) 99999          b) 100000          c) 999999          d) None of these

# THE MYSTERIOUS POSTER

*Marking Scheme : Full or Nil with maximum of 5*
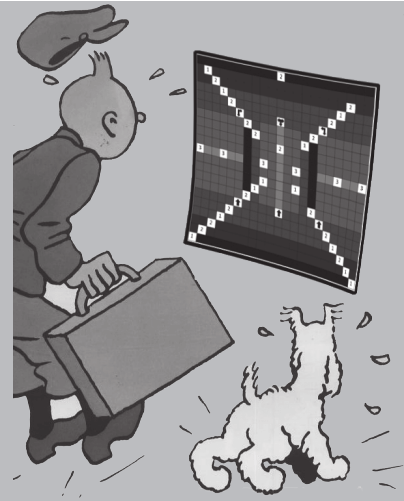
**Question 20 :**

*Moving further ahead, they reach the castle walls where Tintin sees this mysterious poster (shown below) pasted on the wall. He realised that an entrance through a secret tunnel lay behind it which can be opened by climbing the "spiraling green leaves". He realises that the poster is hinting towards a word. So help Tintin crack the logic of the poster, which demands the 4th letter in the word.*



(a)H
(b)B
(c)E
(d)D
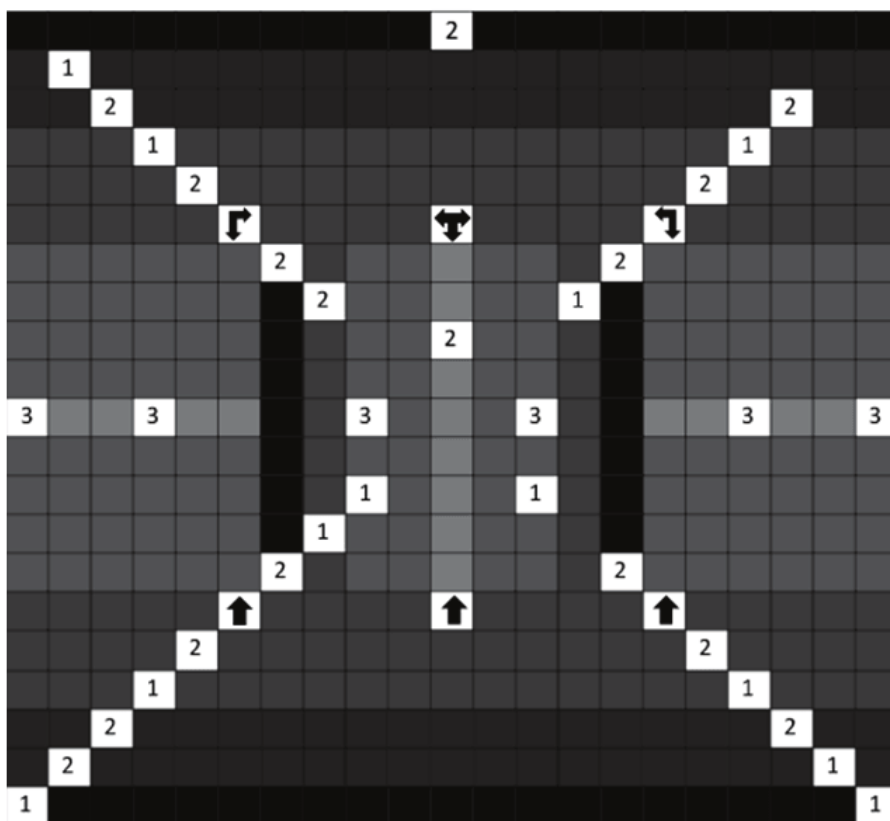
Once inside the tunnel they walk a long distance before coming to a halt in front of a huge gate with a chest placed near it. It is written that the key of the gate is in the chest.

**Question 21 :**
The chest is locked by a number of padlocks. All padlocks must be unlocked in order to open the chest. 12 Copies of the keys to the padlocks are distributed lie next to it, such that any group of 7 or more keys can open the chest should they choose to do so, but any group of less than 7 cannot. What is the minimal number of padlocks required to achieve this?

(a) 330

(b) 495

(c) 792

(d) 924

**Question 22 :**
Tintin unlocks the chest, and plugs the key into the main door. A dial emerges on the door. Beginning with the dial set at zero, the dial must be turned counter-clockwise to the first combination number, (then clockwise back to zero), and clockwise to the second combination number, (then counter-clockwise back to zero), and counter-clockwise again to the third and final number, where upon the door shall immediately spring open. There are 40 numbers on the dial, including the zero.
Without knowing the combination numbers, what is the maximum number of trials required to open the safe (one trial equals one attempt to dial a full three-number combination)?

(a) 64000

(b) 1600

(c) 63999

(d) 1599

Technothlon
the international school championship
.....Inspiring Young minds!

15

Techniche
The annual Techno-Management Festival
IIT Guwahati | 1st - 4th September 2016

# THE INTEL LEAK

*Marking Scheme : Lazy Caterer's Sequence*

After successfully infiltrating into the castle, Tintin has to send a word back to his island for his army to prepare, so he uses his secret cube technique. He made an hollow glassy rubik's cube that can be unfolded in any fashion like any normal cube. He inscribed letters on the centre square of each face indicating the orientation of cube which she always keep the same( F-front , B-back, L-left, R-right, U-up , D-down) and also inscribed digits from 1-8 on rest of the squares.The unfolded image of the current configuration is shown in fig_1.

He wrote one word on each face in the gaps and rotated left and right face clockwise and also makes an additional rotation. Unfolding the cube in some another way, which is shown in fig_2 , he sends it with his pigeon.
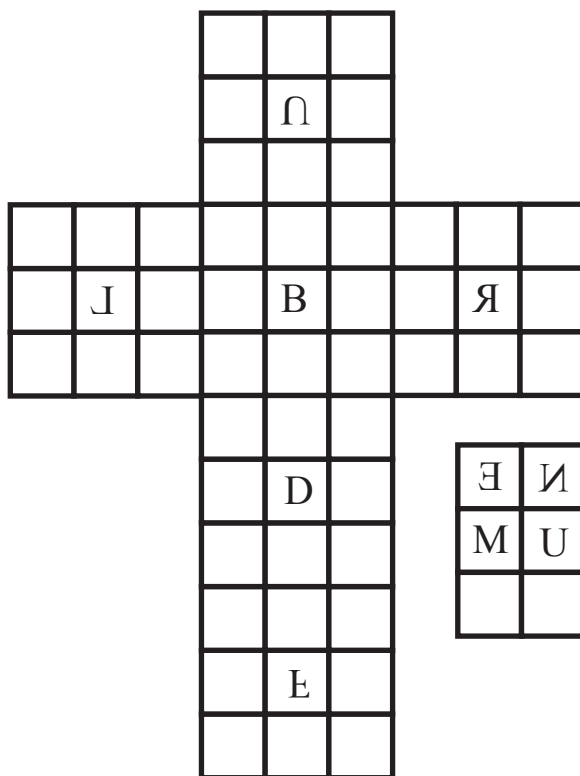
fig_2

fig_1
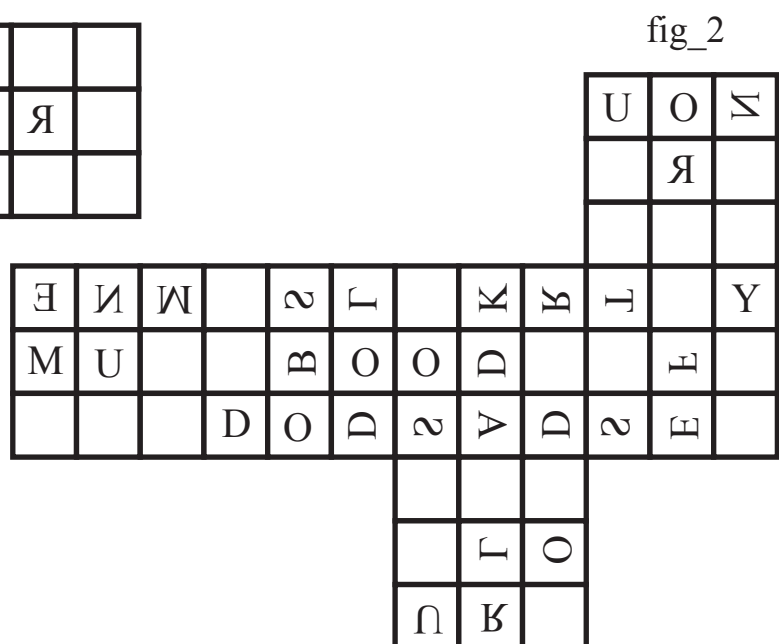
*Question 23 :*
*What was the additional rotation that Tintin made?*

    *(a) Down face Clockwise Rotation*
    *(b) Up face counter-clockwise rotation*
    *(c) Down Face counter clockwise Rotation*
    *(d) Up face clockwise rotation*

*Question 24 :*
*How many letters are common on Front and Back face before making any rotations ?*

    *(a) 2*
    *(b) 3*
    *(c) 4*
    *(d) None of These*

# Instructions for TechnoFin

## (Please read this before attempting the section - TechnoFin)

### Introduction

*Perturbed by the inadequate and below par Financial literacy among school students in our nation, The Finance and Economics Club, IIT Guwahati introduces its initiative, TechnoFin in association with Technothlon to foster the Financial literacy.*

*With the intention of catalyzing the proliferation of Financial literacy among Indian youth, TechnoFin aims to acquaint the school-going students with basic economic and Financial concepts and terminology which, in turn, will hand over to them the required tools to cope up with the complex Financial world outside and to manage their personal Finances as well.*

### General Instructions

    *1. Verify that there are 5 questions under TechnoFin.*
    *2. Write the answers in the TechnoFin section given at the end of the OMR.*
    *3. All answers must be clear and legible. In case of any ambiguity, the decision of evaluator is final.*
    *4. No queries regarding the correctness of the questions shall be entertained.*
    *5. It is **not compulsory** to attempt TechnoFin.*

*NO MARKS AWARDED FOR TECHNOFIN WILL BE INCLUDED IN TECHNOTHLON. EVERY TEAM ATTEMPTING TECHNOFIN WILL GET AN E-CERTIFICATE FROM THE FINANCE AND ECONOMICS CLUB, IIT GUWAHATI.*
*STUDENTS WHO WILL OUTPERFORM THE OTHERS WILL GET A SPECIAL AC-KNOWLEDGMENT E-CERTIFICATE FROM THE FINANCE AND ECONOMICS CLUB, IIT GUWAHATI.*

*You can follow the Finance and Economics club IIT Guwahati at*
*www.facebook.com/financeclubiitg*

# TechnoFin

**Foreign direct investment** (FDI) simply means foreign companies invest in local businesses actively. It might include involve either creation of new factory and new businesses as in the case of Walmart setting up its business in India. You are a Lecturer at RBI's boot camp for students. Now your job is to teach the students about FDI and answer their queries. What will be your answer to the following questions put up by the students?

## Question 1:

Which of the following would be an example of foreign direct investment from the United States to India?

a) Microsoft (U.S based) hiring an Indian computer programmer to debug some software for it.

b) Bank of America buys bonds issued by an Indian computer manufacturer.

c) U.S. car manufacturer entering into a contract with an Indian firm(TATA) for the latter to make and sell it spark plugs.

d) Warren Buffet (a U.S. citizen and investor) buying a controlling share in a Indian electronics firm.

Suppose that China has previously had restrictions on inflows of foreign direct investment from all sources, including the United States. Then suppose that they remove those restrictions on flows from the United States in a particular industry, say Noodles. As a result, several noodle producers in the U.S. move production to China via FDI. Indicate for each of the groups below whether you expect them to gain or to lose from this flow of investment.

## Question 2:

Workers previously employed in noodles production in the U.S. -
   a) Gain      b) Lose      c) It will not affect them      d) Can't say

## Question 3:

Owners of firms that move production to China -
   a) Gain      b) Lose      c) It will not affect them      d) Can't say

Technothlon
the international school championship
.....Inspiring Young minds!

Techniche
The annual Techno-Management Festival
IIT Guwahati | 1st - 4th September 2016

## Question 4:

Assume that India has no domestic sources of wood, it imports all its wood from wood-producing countries. If the price of wood in wood-producing countries rises substantially, which of the following is most likely to occur?

   a) India will import more wood to meet rising demand.
   b) India will impose a tariff on wood imports
   c) Housing prices in India will increase as wood imports become more expensive.
   d) Profits in other wood-producing countries will increase because of increased exports to India.

## Question 5:

Supply and demand is perhaps one of the most fundamental concepts of economics and it is the backbone of a market economy. Demand refers to how much (quantity) of a product or service is desired by buyers. Supply represents how much the market can offer. Price, therefore, is a reflection of supply and demand. When supply and demand are equal the economy is said to be at equilibrium. At this point, the allocation of goods is at its most efficient. If the price is set too high, excess supply will be created within the economy and there will be allocative inefficiency. Excess demand is created when price is set below the equilibrium price. Because the price is so low, too many consumers want the good while producers are not making enough of it. Refer to the following supply and demand graph prepares by a government agency in UK.

THE MARKET FOR CHOCOLATE
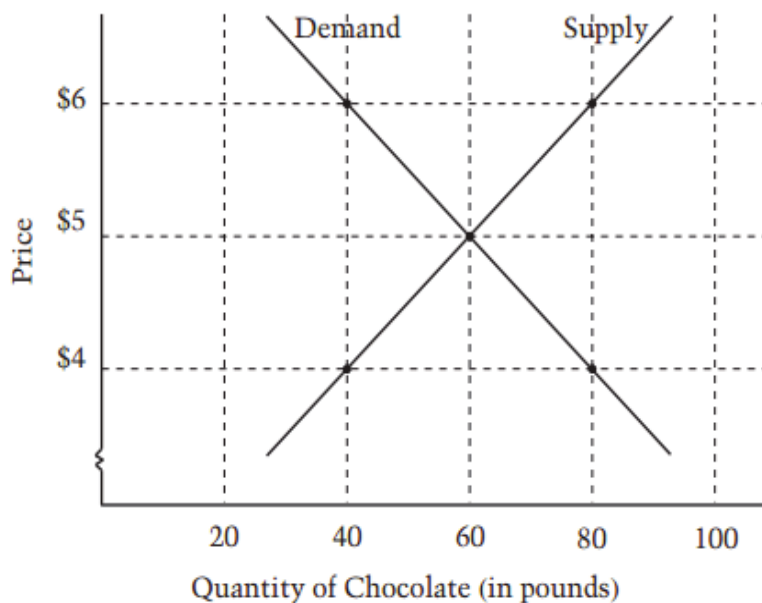


Suppose that the government set the price of chocolate at $6 per pound. Which of the following statements best describes an effect of this price control?

   a) There would be a surplus of 40 pounds of chocolate.
   b) Less chocolate would be demanded at $4 than at $6.
   c) Producers of chocolate would want the price set at $4.
   d) There would be a shortage of 20 pounds of chocolate.

**Technothlon**
the international school championship
.....Inspiring Young minds!

20

**Techniche**
The annual Techno-Management Festival
IIT Guwahati | 1st - 4th September 2016

# A word from organizers of Technothlon 2016

*Hey!*

*We hope you had an intriguing two and a half hours racking your brains and scribbling your pens and pencil on the question paper which has been argued as one of the most competitive examinations conducted for the school students in India and abroad. Numerous thoughts might have passed through your mind. While at the other end, when we were deeply engrossed in the process of making the question paper, we too had our thoughts running - "Is the paper too tough? Will the students find it interesting to solve the paper? Are the questions too arbitrary?"*

*After long thinking and contemplation we realised and this answer came up to us : "Its quite difficult to solve most of this paper in the stipulated time but that isn't our aim. Our aim is that you enjoy solving the paper - whether you solve it in the given time or afterwards. Our intention was to select the best and the brightest minds from across the country, through a paper that would uniformly inspire all youngs minds that wrote it. This thirteenth edition of Technothlon prelims comes close to testing the mental prowess that a student requires to become a world leader and in turn inspire as many young minds as he/she can.*

*Qualifying the Prelims would surely add as a boost to you and an excitement to look forward in the form of a visit to IIT Guwahati, and also to participate in the cool events that are in the process of design. With a prospect of winning the Ultimate School Champion title and thus a trip to the **AMES Research Centre of NASA in California, USA**, there will be much to aim for and expect laurels.*

*However, in case you fail to do so, remember, it is never the end until you decide it to be, and never losing faith is necessary for success in life. As it is said, failures are the pillars to success! We do hope that you will positively take up this challenge, again come back next year and clear one of the most competitive exam.*

*Until then, farewell and best of luck!*

**Techn⊚thlon**
the international school championship
.....Inspiring Young minds!

**Techniche**
The annual Techno-Management Festival
*IIT Guwahati | 1st - 4th September 2016*

# An open invitation for a lifelong association with Technothlon

*Before you feel like you have reached the end of a sensation, we should remind you that this is merely the beginning! The Technothlon community has been growing at a phenomenal rate, and we invite YOU, the future leaders of the country, to be a part of it. Regardless of whether you make it through to the final round or not, we cherish the opportunity to interact with every one of you. Facebook is our means of reaching out to the student community. Be connected, stay updated!*

*We are eager to help through counselling of any kind required in any sphere by utilizing the experienced pool of IITians and highly qualified faculty of IIT Guwahati. And finally, we would be glad to receive any constructive feedback about the question-paper or any general issue that you would like to discuss with us. After all, your feedback is what Technothlon thrives on for improvement.*

### Chief Organizing Team

Dhrubojit Bhattacharya

Amogh Shankar Gupta

Akshay Alikanti

Akshit Ughade

Soumik Mukhopadhyay

A. G. Goutham

### Contact us at -

www.technothlon.techniche.org

https://plus.google.com/+technothlon

https://www.facebook.com/technothlon.techniche

http://technothlon.tumblr.com/

Technothlon
the international school championship
.....Inspiring Young minds!

Techniche
The annual Techno-Management Festival
*IIT Guwahati | 1st - 4th September 2016*

Like a picturesque canvas has the most precise blend of colours, patterns and brush strokes, Techniche year after year promises to be a perfect blend of ideas, innovation and enthrallment. It has stayed true to its vision of motivating the youth of our nation to think out of the box, expand their horizons and reach the zenith of success in all techno-management spheres. Techniche brings forth a kaleidoscope of events, be it the astounding keynotes delivered by globally admired personalities in The Lecture Series or the opportunity to interact with eminent industrialists in The Industrial Conclave. Rediscover your inclination towards the literary aspect of life challenging Literary Events and a chance to perfect your art of diplomacy through IIT Guwahati's Model United Nations. From thrilling Robotic competitions to the enriching Workshops, every bit promises to be a fulfilling experience. With innovative ideas like Technothlon - The International School Championship, The Guwahati Half Marathon as well as other life inspiring initiatives, Techniche has left no stone unturned and now takes pride in being one of the premiere techno-management festivals of the nation.

## LECTURE SERIES

The Lecture Series serves as a platform to inspire and motivate thousands of young minds across the world by connecting them with the pioneers in various elds. Students and professors, participants and school children alike, all clamour into the auditorium to interact with illustrious gures from all walks of life who come under one roof and share their experiences and ideas. It brings you an opportunity to interact with such personalities who are at the helm of changing our world today. Previous speakers who have graced the lecture series include the likes of John C. Mather (The 2006 Physics Nobel Laureate), Lyn Evans (Project Leader, Large Hadron Collider, CERN), Pranav Mistry (The Inventor of 6th Sense Technology), Stephen P.Morse (Chief Architect, Intel 8086 Microprocessor), Richard Stallman (Founder, Free Software Movement), Walter Bender (Ex-Director, MIT Media Labs), etc. Having gained immense popularity over the past few years, it is widely recognized as the biggest and the best lecture series in the entire nation.

Technothlon
the international school championship
.....Inspiring Young minds!

23

Techniche
The annual Techno-Management Festival
IIT Guwahati | 1st - 4th September 2016

## INDUSTRIAL CONCLAVE

*Industrial Conclave, has been, and forges ahead as an ideal interface between the industry and the students to inspire, motivate and train them for the battle for success in life. In this 3 day long, high profile event, eminent personalities from various spheres share their invaluable experiences which helps the young minds understand the internal dynamics of the ever growing industry.The past editions saw the likes of Mr. Marten Pieters (MD and CEO, Vodafone India), Ms. Vinita Bali (Former CEO and MD, Britannia Industries Ltd), Mr. Arun Iyer (National Creative Director, Lowe Lintas India) among others, the Conclave has ceaselessly grown bigger and better, every year. So, ladies and gentlemen, register now, and witness all the action, here at the Industrial Conclave 2016.*

## MODEL UNITED NATIONS

*Born with the aim to bring out the best in every individual, the concept of IITG MUN is guided by a set of values and goals that seeks to provide every individual "hands down" idea of the intricacies of the decision making process at international level, in an eort to provide holistic development of society as a unit.*

## ROBOTICS

*The Robotics module of Techniche 2016 provides you a platform to bring forth new ideas and produce novel technologies in the quest to build the perfect machine. So, put your thinking caps on and let the creative juices ow. From autonomous to manual robotics, there is going to be something for everybody.*

## TECH EXPO

*Techniche's latest undertaking, the TechExpo has been initiated with the cardinal aim of bringing to light the technological advancements made by the youth of this country and provide an opportunity to showcase their innovations on a larger platform.It provides for a platform for the participants to showcase the projects undertaken by them in front of a mass multitude of people which includes but isn't restricted to Professors from various fields, notable personage including Nobel Laureates and Students from the nation.*

*And much more....*

*For sponsorship, contact:*
**Tanuj Agarwal**
*Marketing and Corporate Relations*
*+91-8011028375*
*tanuj@techniche.org*

*For further details, contact:*
**Vikram Aditya**
*Convener*
*+91-8011035410*
*vikram@techniche.org*

**Email us at : info@techniche.org**
**www.techniche.org**
**technothlon.techniche.org**
*fb.com/techniche.iitguwahati | plus.google.com/+techniche | technicheblog.wordpress.com/*

Techn**o**thlon
the international school championship
.....Inspiring Young minds!

24

Techniche
The annual Techno-Management Festival
*IIT Guwahati | 1st - 4th September 2016*

# Rough Page

(Do all the rough work here)

# Rough Page

(Do all the rough work here)

Toppr.com is India's #1 Online Learning Platform for over 1 Million students registered already.

**LEARN** : Exclusive video lecturers, concept notes, curated contended.

**PRACTICE** : Adaptive goal wise assessments, unlimited questions.

**ASK DOUBTS** : Get response from subject expert anytime.

**TEST SERIES** : Largest online test to compete wth thousands.

Packages available for **CLASSES 8th to 12th**          📞 +91 22 61089390

Techn◯thlon
the international school championship
.....Inspiring Young minds!

Techniche
The annual Techno- Management Festival
1st - 4th September