

THE INSIGHT TRAINING INSTITUTE PRESENTS **Haan, JEE**

We all know about the decreased interaction between freshies and their seniors, and their consequent (perceived) lack of *fundae*. We came up with a unique solution. Since they won't learn much about IITB in their first year, why not make them learn before that? Imagine that the JEE was reinvented so as to test students' knowledge of IITB! The questions might look like the ones below...

- Instructions:** 1. This is a 3 hour examination. All questions carry equal marks. Attempt all questions. There is no negative marking
 2. This is also a take-home examination (unless, of course, you live in IITB)
 3. MI/TF/ECell/Main Building Cooperative Store welcome you to IITB (unless, of course, you don't get in)
 ***In order to make the JEE more entertaining, we have also printed ads and matrimonials

Physics

1. T_1 (blue) and T_2 (green) are two *tumtums*. T_1 is 30 m long and T_2 is 15 m long. The speed of T_1 , $V_1(x, t) = 3x^2t + 3t^2$. The speed of T_2 , $V_2(x, t) = 3xt - 5t$.

Initially T_1 is at $x = 0$ m and T_2 is at $x = 300$ m. At time $t = 0$, they start moving in a straight line towards each other. How long (in seconds) will they take to pass each other?

- A. 5 B. 10 C. 15 D. 20 E. Infinity, because when they meet, the drivers will stop and talk to each other

2. Initially, we have a professor at room temperature present in a classroom at 8:40 on a Monday morning. At 8:55 (when there are 5 students in the class, out of a possible 65) a student walks in. This causes an increase in temperature due to the specific disliking the professor has for this student.

At 9:05, a front-bencher discovers a mistake in the professor's working, and the professor has to erase everything on the board. At 9:15, course evaluation starts, and the professor cannot complete the portion he had set for himself. What is the final temperature of the professor (in Kelvin)?

- A. 298 B. 299 C. 300 D. 301 E. 6.023×10^{23}

3. Analyze the mechanics of the diagram shown on the right. Draw a free body diagram and find which of the students clinging so desperately to the *tumtum* will be the first to fall down. (Note: this is a very common situation every morning in IITB.)



There are only 6000 cakes of soap left in IITB

S.O.S.- Save Our Soap



IT IS TIME TO ACT IF WE WANT TO SAVE THIS ENDANGERED SPECIES AND ENSURE THAT OUR CHILDREN TOO CAN ENJOY ITS BEAUTY.

MATRIMONIAL

Wanted: groom for fair and lovely girl – IITian, (therefore) age no bar, height no bar, appearance no bar, (preferably) visits no bars.

Wanted: bride for IITian boy – female.

HINT

They forgot to jumble up the match-the-following options!

1. Read the chemical synthesis below and answer the questions that follow.

A is a hostel mess. Various deadly chemicals are prepared in it as follows: B is a watery, tasteless yellow liquid that is either too thick or too thin. B is poured on C, a grain that is usually white and soft elsewhere, but in the presence of A becomes brown and hard.

D is a collection of vintage vegetables floating in a muddy brown liquid. D is commonly and misleadingly called by an obviously false name such as *Shahi Paneer* or *Navratan Korma*. E is a silvery compound floating in sucrose syrup.

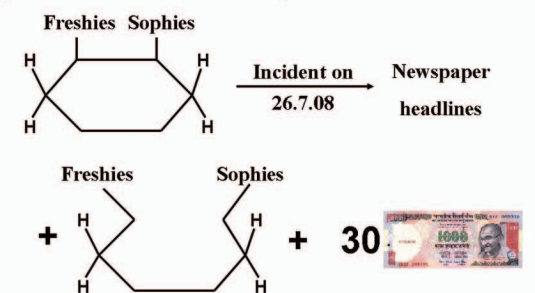
- a. B, C, D and E are mixed. What is the result?
 A. *amrit* B. dynamite C. the hydrogen bomb D. cyanide
 E. Friday night's dinner

Chemistry

b. F is a person that ate B, C, D and E five days consecutively. What is the current state of F?

- A. healthy B. depressed C. sick D. critically ill E. dead

2. Look carefully at the reaction below, and find out where it took place.



- A. In the H4 mess B. Outside the H4 mess C. None of these

Mathematics

1. Let $f(S)$ = number of false promises made by candidate S in the elections in a hostel. Also, let the integral I be defined as follows:

$$I = \int_{t=\text{ElectionDay}-1}^{t=\text{ElectionDay}+1} f(S) dt$$

- A. I = infinity for S = any secretary
 B. I = infinity for S = mess secretary = infinity - delta for S = any other secretary
 C. I = infinity for S = mess secretary = 0 for S = lit secretary (he makes no promises anyway!) = 0 for S = wildlife secretary (because there is no such post) = 6000 for S = any other secretary

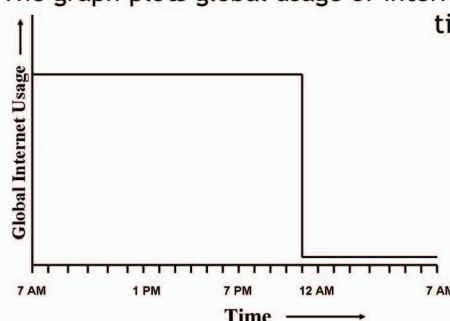
2. Match the following pairs, given that X = number of times an IITian in a particular year (a freshie, sophie, etc.) bathes in a week, and that Y = number of times the parents of an IITian in a particular year expect him to bathe in a week.

X = 3	Y = 14	1 st year
X = 1	Y = 5	2 nd year
X = 0.5	Y = 3	3 rd year
X = 0.002	Y = 0	4 th year

3. Let A and B be two events. Using Bayes' Theorem, match the following sets of A and B to the corresponding probability $P(A|B)$. Note: $P(A|B)$ denotes the probability that an event A will happen if an event B has already happened.

A: getting an AA in a first year MA course B: the course is held under the new curriculum	0.001
A: getting to class before time B: <does not matter; any event>	0
A: Finding the SBI ATM empty B: The ATM does not work	1
A: liking one's hostel room at first sight B: having been exposed to psychologically traumatic incidents since birth	100

4. Give the reason for the sharp fall in this graph. The graph plots global usage of internet against the time of the day.



- A. Manipulation of the data by a freshie analyst
 B. Osama Bin Laden
 C. Global warming
 D. the LAN ban in IITB

5. Which of these numbers is purely imaginary?
 A. the NBD index of a 10 pointer
 B. the amount of money in an average fourthie's wallet
 C. the style quotient of an average IITian
 D. the number of people in an 8:30 lecture on Monday
 E. All of these

CONTEST

Find names of JEE coaching classes hidden in this page and mail us to win exciting prizes. The passage below is a good starting point.

"Attention all JEE time-never-to-come aspirants! Our dedicated rigorous training and course material will ensure that you become more brilliant than ever, fitter than fiit! Our *vidhyarthi*s have always been the toppers, enroll with the best, we'll take care of the rest."

Question Paper Setters:

The Four Horsemen (Niranjan Sridhar, Hemendra, Vishal Ranjan, Vaibhav Devanathan)
 The Unforgiven (Eeshan - 1, Neha - 2, Tanny - 3)
 Ktulu (Ghaza)

Full solutions to this JEE paper available on