Success stories: husk remover, wet grinder...

The success rate is higher when inventors are supported by facilitators

There have been many innovations which have been converted into marketable products. For some, technology transfer took place with the assistance of Technology Business Incubators (TBIs).

Experts agree that TBIs are a great support when it has come to hand-holding in identifying the market, conducting market research, assessment of business potential, structuring and negotiating deals for technology transfer.

“Out of all the innovations that are reaching TBIs, 50% of them are being converted into successful marketable products,” says Anil Wali, director, FITT, IIT Delhi. Some of the innovations by IIT, Delhi researchers that have been converted into cost-effective products are odourless/waterless urinal trap, decorticator (husk remover) of hard nuts, canal lining products etc.

Lovely Professional University, which developed a medicine for colon cancer, has signed a MoU with a pharmaceutical company for its manufacture. Vellore Institute of Technology’s TBI helped the creator of a “wet grinder” fetch good compensation by transferring the technology to a manufacturer in Chennai.

FEW TAKERS FOR INNOVATORS

MAKE YOUR IDEA WORK

1. First of all you need to build a model of the innovative idea so that it will explain how your concept can be transformed through technology into a usable product.

2. For the next step, you need to identify whether your innovation requires inputs from experts of various technologies. You have to partner with such people.

3. You also need to prepare a business plan around the idea. You can approach bodies like FITT at IIT Delhi which encourage people to formulate a viable business plan.

4. The next step is to approach an angel investor or business incubators. The advantage of approaching FITT is that the experts screen the proposals and help you find a place in an incubation centre.

5. An incubation centre provides opportunities for an early assessment of innovative technologies by identifying their market potential and provides the required support (marketing, operational and financial support). It facilitates commercialisation by providing an opportunity for individuals who have developed innovative products/prototypes and are not in a position to take it to the market on their own and are willing to transfer the technology.
JEE: Prepare, plan and act

No need to fret; chart your course for success

Ranush Bhat
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A
s IIT-Joint Entrance Examination (JEE) is almost six months away, it's time for you to gear up. The new selection system gives importance to Class 12 higher marks, so one must prepare for both the exams simultaneously. The students must practice ACET problems while brushing up JEE chapters. For better preparation, one can join a test series program. These tests not only check an individual's level of preparation for the JEE but also make him/her aware of one's command over the subject, strong and weak areas and writing speed. Here are a few tips that can help you make a mark:

Time management
While dealing with exam pressure, time management plays a crucial role. Here are some tips:

- Divide six months for the three subjects
- Prepare a chapter-wise and topic-wise revision schedule
- Create short notes, list all formulas and points to remember. This will help in quick revision

Correct methodology
The correct approach for those appearing for JEE from the first or second (last) time is to stick to one source and not refer to a multitude of books/ study material available in the market. For example, an engineering student must prepare all topics covering physics, chemistry and mathematics from the Central Board of Secondary Education (CBSE) syllabus of Class 11 and Class 12 for JEE main. However, for architecture, one has to additionally prepare for the aptitude test and drawing test.

Month-wise planning
November-February:
One can utilise time for JEE preparation by focusing on each chapter separately. Murcha keep this month mainly for board exams, except for certain days when you can solve papers for IIT-JEE. April:
As JEE (main) is some 2 months away, one can only revise formulas and take mock tests.

All subjects—physics, chemistry and mathematics—are equally important, thus one must devote at least two-three hours to each subject on a daily basis. It's the quality of time spent on self-study that matters, not quantity. It's advisable to take a minimum of 20 mock tests (based on the new pattern) from a reputable source and solve at least last five years' IIT-JEE papers.

Important topics
The syllabus of Class 11 and 12 contribute about 45% and 55% of IIT-JEE question papers, respectively. While preparing, put most stress on the following topics:

- Mathematics: Quantum equations and expressions, coordinate geometry, probability, vectors, matrices in algebra; circle, parabola, ellipse and hyperbola in coordinate geometry; functions, limits, continuity and differentiability, applications of derivatives, definite integral in calculus
- Physics: Mechanics, thermodynamics, waves and sound, capacitors and electrostatics, magnets, electromagnetic induction, optics and modern physics
- Chemistry: Coordination chemistry and chemical bonding in inorganic chemistry, electrochemistry, chemical and atomic equilibrium, mole concept in physical chemistry and organic chemistry.

As they say, practice makes a man perfect. Practice as much as you can for JEE. Generally one must keep in mind the following things while preparing:

- Always start from the basics
- Don't refer to solutions till you get the right answer
- Avoid leaving the question midway because one must know till what level their concepts are clear
- Always take a conceptual approach and understand the question properly. Never cram.
- Spare some time to relax
- Study on a regular basis
- Sleep for at least six hours a day to refresh your mind
- Never lose your self-confidence
- Keep in touch with intelligent students of your class or coaching centre to get that extra edge
- Make it a point to appear in all the state-level Olympiads, KVPY, SAT, advanced placements etc to improve your aptitude and analytical ability
- Prepare as per prescribed syllabus of the exams. Don't over-stress yourself
- Whenever you complete a chapter or topic, go through that topic again from NCERT books as this would prepare you for the boards as well
- Problem-solving should be more qualitative than quantitative
- If one has the right attitude, then even an average student can clear it successfully

The author is FTGJEE head, Agra.

All you need to know about GATE

Here's the low-down on the pattern and why it helps to take this test

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The Indian Institute of Technology, New Delhi, recently introduced the Graduate Aptitude Test in Engineering (GATE). The examination essentially tests the candidate's ability to comprehend and apply concepts in different fields of engineering and science. The test is divided into two parts: General Aptitude Test and Subject Test.

General Aptitude Test
The General Aptitude Test is designed to assess the candidate's ability to understand and apply concepts in different fields of engineering and science. The test is divided into two parts: General Aptitude and Subject Test.

Subject Test
The Subject Test is designed to assess the candidate's ability to understand and apply concepts in different fields of engineering and science. The test is divided into two parts: General Aptitude and Subject Test.

GATE Exam Pattern
The GATE exam is conducted on a computerized basis. The exam is divided into two parts: General Aptitude and Subject Test.

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Sample Questions
Here are a few sample questions from the GATE exam:

1. If a + b = 3, b + c = 4, and a + c = 5, then the value of a + b + c is:
   a) 9
   b) 6
   c) 12
   d) 15

   Answer: a) 9

2. The area of a circle is equal to the area of a square. If the side of the square is 5 cm, then the radius of the circle is:
   a) 5 cm
   b) 10 cm
   c) 7.5 cm
   d) 2.5 cm

   Answer: c) 7.5 cm

3. If a, b, and c are real numbers such that a + b + c = 0, then the value of (a + b)^2 + (b + c)^2 + (c + a)^2 is:
   a) 0
   b) 2(ab + bc + ca)
   c) 3(ab + bc + ca)
   d) 6(ab + bc + ca)

   Answer: b) 2(ab + bc + ca)

4. The sum of the first n terms of an arithmetic progression is given by S_n = \frac{n}{2}[2a + (n-1)d], where a is the first term and d is the common difference. If the sum of the first 10 terms is 110, then the value of a and d is:
   a) a = 5, d = 2
   b) a = 5, d = 1
   c) a = 2, d = 5
   d) a = 1, d = 5

   Answer: a) a = 5, d = 2

These questions are just a few examples of the types of questions that may appear in the GATE exam. The exam is known for its challenging questions and is designed to assess the candidate's ability to understand and apply concepts in different fields of engineering and science. The best way to prepare for the GATE exam is to practice as much as possible and to ensure a strong understanding of the concepts involved. Good luck!
IIT KHARAGPUR TO ORGANISE KSHITIJ IN FEB

BOPAL: IIT Kharagpur will host its annual techno-management fest-Kshitij—from February 1st to 4th, 2013. Engineering students from any part of the country can take part in it.

To participate in the fest the students need to register on the website, www.kjt.in. It recorded a whopping 8 million hits last year, says a press release. As per the release, Kshitij offers a national-level platform for the students to showcase their technical and managerial prowess in over 40 events encompassing 9 diverse genres. The release says the association of globally-reputed organisations like ACM, ASME, IMechE, IEEE and ASHRAE with flagship events stands testimony to the outstanding quality of participation in the fest.

ACM certifies the popular night-long coding competition ‘Overnite’ while the aircraft designing competition ‘Laws of Motion’ is backed by IMechE (Institution of Mechanical Engineers). These events are sponsored by the likes of Facebook, Google, IBM, Tata and Barclays Capital, among other noted Fortune 500 companies.

In the event ‘B Plan’, the budding entrepreneurs can submit the executive summary of their business idea and receive huge incubation from angel investors and venture capitalists to kick-start their dream venture.

Apart from events, Kshitij organises guest lectures featuring eminent personalities from the world over. In the past, dignitaries like Nobel laureate Sir James Mirrieles, co-founder of Wikipedia Jimmy Wales, inventor of the USB Ajay Bhatt as well as acclaimed actor Nasseruddin Shah have addressed the students.
NATION

‘30% enrolment goal in higher education’

Pulwama (Jammu and Kashmir):
Union human resource development minister Kapil Sibal on Tuesday said private educational institutions would have to play a key role to achieve the target of 30% enrolment in higher education by 2020 at national level.

“When we will have maximum number of students passing out from schools, the enrolment ratio will increase. We have set a target of 100% retention in schools by 2020,” Sibal said at a function near Srinagar. PTI
इंधन और बिजली उत्पादन में मदद करेगी सौर ऊर्जा

कुछ दिन पहले ब्रिटिश विज्ञानिकों ने एवं संयुक्त राष्ट्र के तकनीकी कार्यालय के सदस्यों ने इस विषय पर प्रयोग किया था और यह निषेध किया था कि इसके प्रकृतिक रूप से मिलते जहां जहाँ कोई सबसे सही निश्चित किया जा सकता है। अब नए विज्ञानिकों ने ऐसे तकनीकी विकसित की है जो सौर ऊर्जा को उत्पादन में प्रयोग करने का संभावना बनाता है।

यह नई टेक्नोलॉजी फोटोवोलटिक विकसित का उपयोग करता है। यह उत्पाद व्यापक में होता है जो सूर्य की रेखा में ऊर्जा को इस रहस्य में मिलता है हज़ारों लाखों रूप में उत्पादन करता है। इसका निर्माण रूप में सबसे महीने, तलाशी और इलाक़े खोजते ही उत्पादन हो जाता है। यह उत्पाद वर्तमान के उत्पाद के जीवन की ऊर्जा के अनुसार में उत्पादन करता है।

अभी तक की कोई ऊर्जा नई तकनीक तक पहुँचने वाली है। इसका संचालन रूप में सबसे महीने, तलाशी और इलाक़े खोजते ही उत्पादन हो जाता है। यह उत्पाद वर्तमान के उत्पाद के जीवन की ऊर्जा के अनुसार में उत्पादन करता है।

P15

Apple Inc, facing competition, introduces a smaller iPad

Apple senior vice-president of worldwide marketing Philip Schiller introduces the new iPad mini during an Apple event in San Jose, California on Tuesday.

"The iPad is the top-selling tablet in the world, but we're not taking our foot off the gas," said Tim Cook, Apple's chief executive, at a press conference here. The introduction of a smaller iPad is a big shift for the company in a market with lots of competition, he said.

"The iPad mini is about 7.9 inches, smaller than the iPad, and it's designed to compete with larger tablets," he said. He added that the iPad mini would be available in two models - Wi-Fi and Wi-Fi + Cellular - and start at $329 for the 16GB model.

"With the new iPad mini, we're giving customers a smaller, lighter, more affordable option," he said.

Indian Express ND 24/10/2012
Microsoft gives a peek at new Windows, tablet

Agence France-Presse
Shanghai, Oct 23

US computing giant Microsoft on Tuesday gave an early peek to the key Chinese market of its new tablet computer and Windows 8 software, promising a "fast and fluid" operating system.

Microsoft will launch Windows 8 and the Surface tablet computer, designed to compete with Apple's popular iPad, in the US on Friday. The launch of the two products in China is the same day.

Windows remains the dominant platform for personal computers, but it has lost ground to Apple and Google in newer devices which use rival operating systems.

"With Windows 8, we introduced this fast and fluid experience that works across a broad range of different types of PCs (personal computers)," said Steven Sinofsky, president of Microsoft's Windows division.

"Windows 8 seamlessly moves between a world of touch-only tablets to laptops that have touch screens to desktops and to portable computers without touch screens," he said in a speech to the media in Shanghai.

Microsoft's new tablet was designed to be a platform for Windows, Sinofsky said, as he compared the challenger to Apple's iPad.

"Even though it's bigger than an iPad, it's actually lighter in your hand because of the way the physics of the design work," he said.

The Surface has a full-sized USB port unlike the iPad, a built-in stand and a cover which doubles as a keyboard, he said, ticking off the features.

The tablet runs the new Windows RT, a form of Windows 8, and comes with Microsoft Office 2013, he added.

It is not Microsoft's first foray into the tablet market. In 2000 the company unveiled a prototype tablet PC and shortly after began licensing its specifications to various manufacturers.

Some who have tested Windows 8 complain about the change from earlier versions of Windows, which could force users to relearn how to operate their computers, the New York Times reported Sunday.