Engineering students might soon have open-book exams

The Indian education system focuses excessively on marks, and performance in final exams often determines "intelligent" and "dull" students.

However, most exams test rote-learning skills, and many toppers succeed by simply memorizing the syllabus, eventually forgetting it immediately afterwards and thus rendering "education” pointless.

The AICTE is now considering an overhaul by introducing open-book exams in engineering courses to test students’ understanding of concepts.

What are open-book exams?

In open-book exams, students are allowed to take books/notes inside the exam hall and refer to them while writing the paper.

Questions test application of concepts, and often there’s no direct answer in the book which can be simply copied.

"(Since) they’re less demanding on memory and hence less stressful, questions can emphasize on problem-solving and higher-order thinking,” a
Conducting open-book exams needs much care

Experts have welcomed the move, but cautioned that conduction of open-book exams needs extreme care.

"Exam reforms cannot be done in isolation; it has to go with teaching reforms," said Pradipta Banerji, Professor, IIT-Bombay.

The report also warned that "the courses or the curriculum areas that are best suited to an open-book exam are to be carefully chosen."

Using Bloom's taxonomy for well-balanced papers

The panel has also suggested using Bloom’s taxonomy to devise balanced question papers to test different capabilities.

Bloom’s taxonomy gives proportionate importance to comprehension, application, analysis, synthesis and evaluation (apart from knowledge).

The panel recommends no more than 40% weight-age should be given to knowledge-oriented questions.

"The weightage for different cognitive levels in question papers can also vary from course to course."

AICTE, HRD to decide on examination reform panel’s recommendation

Among other recommendations of the four-member panel mulling examination reforms are "a wide range of assessment methods (term papers, open-ended problem-solving assignments, course/lab project rubrics, and portfolios)” and internship experiences.

The AICTE and HRD Ministry are examining the suggestions made by the committee formed in January.

They will then decide on implementation. These recommendations will be applicable to engineering and technical institutes under AICTE.
Internships must for engineering students in Telangana

In a move that is expected to improve the quality of engineering education in the State, internships have been made mandatory for engineering students from the academic year 2018-19. The internship has to be taken in the industry concerned by students either after completing their second year or third year of engineering to gain knowledge. So far, students are made to do a mini and major project as part of their final year course. A few students in the engineering colleges take these projects seriously, while the rest buy ready-made projects from the market at a nominal price. Lack of practical knowledge and internship component has dented the quality of the engineering education in the State, according to officials.

Last year, Union Minister for Human Resource Development Prakash Javadekar had announced that engineering students will have to undergo three internships before completing their graduation. According to the model curriculum of the All India Council for Technical Education (AICTE), of 160 credits, 15 will be given for project work, seminar and internships in the industry. Now the students have to mandatorily take up internships ranging between six and eight weeks in the industry. They will be given required credits on successful completion of their internship. The idea of an internship is to reduce theory work and increase practical knowledge among students thereby enhancing the employability rate in the relevant industry.

“From the next academic year, engineering students have to compulsory take up internships for about six to eight weeks,” Navin Mittal, Commissioner of Technical Education, said. Even for students of polytechnic colleges, the internship has been made mandatory. However, their internship will be for about four to six weeks during their course study. Accordingly, the Commissionerate of Technical Education has prepared a model curriculum. From the next academic year, students will have an equal number of practical and theory subjects. Earlier, students had six subjects and four practicals whereas now they will five theory subjects.
and five practicals.

AICTE gets 600 applications for pharma institutes

India is set to witness a rush to set up pharma institutes. Of the 750 applications received by All India Council for Technical Education (AICTE) this year for setting up new institutes, about 600 alone are for pharma institutes.

Until last year, majority of applications received were for new engineering institutes. Pharma displaces engineering for which about 150 applications have been made this year.

In addition, maximum applications for closure are from engineering institutes received by AICTE, accounting for 63% of the total 239 institutes that have applied for closure in 2018-19. Second highest applications for closure have come from management institutes, with almost 107 applying for closure this year. Pharma is just a fraction with only seven institutes applying for closure.

“Institutes are looking at closure due to reduction in demand for some technical courses, their inability to meet the norms and standards set by regulators and due to poor quality losing out to competitors,” said a government official, who did not wish to be named. In all, about 1.5 lakh new seats are likely to be added this year in higher education mostly by pharma, engineering and management institutes.

About 60,000 seats are likely to be added by new institutes and the remaining by existing institutes. The new seats would help boost India’s gross enrolment ratio (GER) in higher education which is at 24.5% (24 of every 100 students are enrolled in higher education for 18-23 years of age group as per MHRD report in 2016-17). This is quite low compared to countries like the US which has GER of 85.80% and China with 43.39%.
Innovation key to realizing dream of 'New India': Honourable Prime Minister Narendra Modi

Innovation and out of the box thinking are the key to realizing the dream of 'New India, Prime Minister Narendra Modi said here on Friday while addressing the grand finale of the Smart India Hackathon via video conferencing.

"Innovation is not merely a word or an event. It's an ongoing process. You can innovate only when you understand a problem and try to find out its solution. We must go to the root of the problem and find out of the box solutions...In the era where knowledge is power, innovation is the driver of growth.

"When I see the young generation busy in innovation with enthusiasm like this, my resolve for 'New India' gets stronger. In the 21st century we will be able to get India the place in the world it deserves. Your energy is the driving force to fulfil the dream of New India," he said.

The Prime Minister gave students the mantra of "IPPP" or "Innovate, Patent, Produce and Prosper".

"These four steps will lead our country towards faster development. For that we will have to innovate and turn our innovations in patents, making our production smoother and taking products speedily to the people will make them prosper," he said, adding: "But we must look for need based innovations not greed based innovations."

The two-day finale of the Hackathon is being held at 28 nodal centers across the country. There are 1,296 entries selected for the finals out of more than 17,400 teams with participation of around one lakh students of engineering, management and MCA.
Modi said that his government aims to introduce students at a young age to the technology of future such as Internet of Things, Artificial Intelligence, Block Chain technology and Robotics etc even before they reach engineering colleges.

"If you have developed an innovative mind in the teenage, half the job is done," he said, urging participants to explore the possibility of multiple sector Hackathons like Health-Hackathon, Law-Hackathon, Architecture-Hackathon, Agriculture-Hackathon and Rural Hackathon.

"We need innovative agriculturists, engineers, architects, doctors, lawyers, managers for these Hackathon. Such Hackathons will provide a platform to budding talents," Modi said.

The Prime Minister also interacted with the participants of Smart India Hackathon across various centers

Earlier in the day, Human Resource Development Minister Prakash Javadekar launched the finale here and asked the participants to devise solutions for making exams "leak-proof".

He said though the problem was not a subject of this year’s competition, he asked the students to "work on the solution of full proof examination" after the competition gets over.

This the second edition of the competition which was first held last year and is organised by the All India Council for Technical Education for the HRD Ministry.

The competition comprises of two parts -- Software Hackathon and Hardware Hackathon. The final round of Hardware Hackathon competition will be conducted in June.

Javadekar said that 27 innovations made by students during the last year Smart India Hackathon are in the final stage and ready for deployment. He said that this year, with the participation of more students and more teams, 100 more innovations will come out this year.

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