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CORRESPONDENCE

A crisis in engineering education

There exists an acute shortage of high-quality teachers in engineering institutions, particularly in the high technology areas. Young talents are not attracted to teaching because of the long drawn process of acquiring the minimum required qualification (a Ph D for IITs, IISc, etc./M Tech for others) and then starting at the same or perhaps a lower salary than what he/she would have got had he/she chosen to join industry immediately after the first degree (B Tech). True, there are exceptions, but they are so insignificant in number that they do not count. Also, even if a young talent joins the teaching profession, the career prospects are rather limited, because the salary of the highest available position in the profession, viz. that of a full professor compares rather poorly with that of a comparable person in industry. This gap has widened, rather than shortened, over the years, particularly in areas like electronics and computers. The situation is such that most of the engineering institutions

have to make do with whatever is available in the market, and this is far from being a happy situation. Moreover, adequate manpower, even of questionable competence, is not available so that there exists, always, a significant number of vacant positions in any institution. Obviously such manpower cannot produce high-quality graduates even if the entrants to the courses are of high quality. The process, if allowed to continue, will create, or has already created, a vicious circle. For the advancement of technology, and for technological progress of the country, effective and concrete solutions to the problem must be found and implemented – the sooner, the better!

What constitutes an effective solution? To retain high-quality retiring teachers for a few more years? This has been, and is being tried in many places. But then this is, at best, a temporary measure and cannot be a permanent solution. The obvious solution is to make the teaching profession a very

prestigious one – in monetary as well as other terms so that the most talented young people are attracted to this profession, rather than to civil service or industry. Let the level of achievement demanded for the lowest position be high, but let it be justified not only on academic grounds but also in terms of monetary benefits. This will need a substantial change in the attitude of the Government and other funding agencies towards education to the extent that they are willing to allocate to education, a budget which compares not too unfavourably with that of some other important sector (like defence, for example?).

Shortage of good teachers in engineering education has reached a crisis point and this fact deserves serious concern and attention of all concerned.

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Vitamin C: A vital nutrient

The review article published by Indu B. Chatterjee and coworkers (*Curr. Sci.*, 1995, 69, 747–751) on 'Vitamin C: A potential saviour against free radical-induced oxidative damage' is really a beautiful one, picturizing the story of an essential nutrient which has varied roles in human nutrition. The article has effectively pointed out the importance of vitamin C and how it functions in order to prevent the various degenerative diseases and aging. Vitamin C is one of the most neglected nutrients in our dietaries. The essential and rich sources of vitamin C are green leafy vegetables and fruits, which are often neglected. In a

country like ours where cereal-based diet is the staple one, availability of this vitamin can only be through the inclusion of green leafy vegetables (GLV) and fruits, which has been drastically reduced compared to the earlier days due to the blind emulation of westernized diet patterns, where high-calorie diets play an important role, with relatively low vitamin C content. This is really a disappointing trend as we have rich edible plant diversity, with good vitamin C content. The recent tendency towards animal foods, which are low in vitamin C content, should be checked and ample thrust should be given to the inclusion of GLV and fruits, atleast a minimum of 50–75 g daily, in our food

pattern. The best way would be the raw form as far as possible because vitamin C is heat labile and easily destroyed during prolonged heating, to reap the full potential of this vital nutrient.

Indeed the most important reasons for developing many degenerative diseases are improper diet pattern and sedentary life style. But inclusion of the essential nutrients can improve the situation to some extent.

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