

VEL700 Human Values and Technology
Minor Test - 1

August 27, 2016

Max. Marks: 30

Duration: 1 hour

Note: Credits are given to how balanced you are in your assessment / analysis of a situation, and not for aligning yourself with one kind of views alone. Be objective in your answers, and do not be worried to express your views.

1. Read the following passage extracted from the book "Small is Beautiful: Economics as if People Mattered" by E.F. Schumacher (1972) and answer the questions given below it briefly, in your own words.

The Problem of Production

Modern man does not experience himself as a part of nature but as an outside force destined to dominate and conquer it. He even talks of a battle with nature, forgetting that, if he won the battle, he would find himself on the losing side. The illusion of unlimited power, nourished by astonishing scientific and technological achievements, has produced the concurrent illusion of having solved the problem of production. The latter illusion is based on the failure to distinguish between income and capital where this distinction matters most.

Let us take a closer look at this 'natural capital'. First of all, and most obviously, there are the fossil fuels. No-one, I am sure, will deny that we are treating them as income items although they are undeniably capital items. If we treated them as capital items, we should be concerned with conservation: we should do everything in our power to try and minimise their current rate of use. And we do not do any of them, but the exact contrary of every one of them: we are not in the least concerned with conservation: we are maximising, instead of minimising the current rates of use; and, far from being interested in studying the possibilities of alternative methods of production and patterns of living - so as to get off the collision course on which we are moving with ever-increasing speed - we happily talk of unlimited progress.

But what - it will be asked - about the income (read nuclear) fuels? Yes, indeed, what about them? Currently, they contribute (reckoned in calories) less than four per cent to the world total. In the foreseeable future they will have to contribute seventy, eighty, ninety per cent. Perhaps we can assume that nature's tolerance margins will be able to cope with small impositions, although there are many people even today who are deeply worried, and Dr Edward D. David, President Nixon's Science Adviser, talking about the storage of radioactive wastes, says that 'one has a queasy feeling about something that has to stay underground and be pretty well sealed off for 25,000 years before it is harmless'. However that may be, the point I am making is a very simple one: the proposition to replace thousands of millions of tons of fossil fuels, every year, by nuclear energy means to 'solve' the fuel problem by creating an environmental and ecological problem of such a monstrous magnitude that Dr David will not be the only one to have 'a queasy feeling'. It means solving one problem by shifting it to another sphere - there to create an infinitely bigger problem.

Having said this, I am sure that I shall be confronted with another, even more daring proposition: namely, that future scientists and technologists will be able to devise safety rules and precautions of such perfection that the using, transporting, processing and storing of radioactive materials in ever-increasing quantities will be made entirely safe; also that it will be the task of politicians and social scientists to create a world society in which wars or civil disturbances can never happen. Again, it is a proposition to solve one problem simply by shifting it to another sphere, the sphere of everyday human behaviour. And this takes us to the third category of 'natural capital' which we are recklessly squandering because we treat it as if it were income: as if it were something we had made ourselves and could easily replace out of our much-vaunted and rapidly rising productivity.

Is it not evident that our current methods of production are already eating into the very substance of industrial man? I started by saying that one of the most fateful errors of our age is the belief that the problem of production has been solved. To use the language of the economist, it lives on irreplaceable capital which it cheerfully treats as income. I specified three categories of such capital: fossil fuels, the tolerance margins of nature, and the human substance. Even if some readers should refuse to accept all three parts of my argument, I suggest that any one of them suffices to make my case.

And what is my case? Simply that our most important task is to get off our present collision course. To say the least - which is already very much - we must thoroughly understand the problem and begin to see the possibility of evolving a new life-style, with new methods of production and new patterns of consumption: a life-style designed for permanence. To give only three preliminary examples: in agriculture and horticulture, we can interest ourselves in the perfection of production methods which are biologically sound, build up soil fertility, and produce health, beauty and permanence. Productivity will then look after itself. In industry, we can interest ourselves in the evolution of small-scale technology, relatively non-violent technology, 'technology with a human face', so that people have a chance to enjoy themselves while they are working, instead of working solely for their pay packet and hoping, usually forlornly, for enjoyment solely during their leisure time. In industry, again - and, surely, industry is the pace-setter of modern life - we can interest ourselves in new forms of partnership between management and men, even forms of common ownership.

We often hear it said that we are entering the era of 'the Learning Society'. Let us hope this is true. We still have to learn how to live peacefully, not only with our fellow men but also with nature and, above all, with those Higher Powers which have made nature and have made us; for, assuredly, we have not come about by accident and certainly have not made ourselves.

- (a) Write a summary of the above passage in 3-4 sentences (250 words) (3)
(b) Explain any two of the three parts of his argument (2 × 250 words) (6)
(c) What is the case he is making? Do you agree? Explain your response. (6)
(d) Connect the arguments in the passage to those in any one of the videos used in the class, and explain what you conclude. (6)

2. Write short notes (250 words) on any three of the following: (3 × 3)

- (a) Planned and perceived obsolescence
(b) Reductionism
(c) Role of value system in choice of technology
(d) Linear system on a finite planet
(e) "Dead matter go out improved, while men there are degraded"