

St Joseph's College (Autonomous) Bangalore

Mid-Semester Test - August 2016

M.A. English - III Semester

ENOE 9616 Open Elective Reading and Writing for the Sciences

Time: 90 minutes.

Marks: 35

SECTION-A

I Answer any ONE of the following:

(1x10=10)

1. Discuss any two ideas that you found meaningful and insightful in your classroom experience in the course thus far.
2. Discuss with suitable examples what you view as the main distinctions between science and pseudo-science.

SECTION-B

Read the following excerpt of an article by George Orwell written at the close of the Second World War (1945) and answer any TWO of the questions that follow: (2x10=20)

Science is generally taken as meaning either (a) the exact sciences, such as chemistry, physics, etc., or (b) a method of thought which obtains verifiable results by reasoning logically from observed fact.

If you ask any scientist, or indeed almost any educated person, 'What is science?' you are likely to get an answer approximating to (b). In everyday life, however, both in speaking and in writing, when people say 'science' they mean (a). Science means something that happens in a laboratory: the very word calls up a picture of graphs, test-tubes, balances, Bunsen burners, microscopes. A biologist, and astronomer, perhaps a psychologist or a mathematician is described as a 'man of science': no one would think of applying this term to a statesman, a poet, a journalist or even a philosopher. And those who tell us that the young must be scientifically educated mean, almost invariably, that they should be taught more about radioactivity, or the stars, or the physiology or their own bodies, rather than that they should be taught to think more exactly.

This confusion of meaning, which is partly deliberate, has in it a great danger. Implied in the demand for more scientific education is the claim that if one has been scientifically trained one's approach to all subjects will be more intelligent than if one had had no such training. A scientist's political opinions, it is assumed, his opinions on sociological questions, on morals, on philosophy, perhaps even on the arts, will be more valuable than those of a layman. The world, in other words, would be a better place if the scientists were in control of it. But a 'scientist', as we have just seen, means in practice a specialist in one of the exact sciences. It follows that a chemist or a physicist, as such, is politically more intelligent than a poet or a lawyer, as such. And, in fact, there are already millions of people who do believe this.

But is it really true that a 'scientist', in this narrower sense, is any likelier than other people to approach non-scientific problems in an objective way? There is not much reason for thinking so.

Take one simple test — the ability to withstand nationalism. It is often loosely said that 'Science is international', but in practice the scientific workers of all countries line up behind their own governments with fewer scruples than are felt by the writers and the artists. The German scientific community, as a whole, made no resistance to Hitler. Hitler may have ruined the long-term prospects of German science, but there were still plenty of gifted men to do the necessary research on such things as synthetic oil, jet planes, rocket projectiles and the atomic bomb. Without them the German war machine could never have been built up.

But does all this mean that the general public should not be more scientifically educated? On the contrary! All it means is that scientific education for the masses will do little good, and probably a lot of harm, if it simply boils down to more physics, more chemistry, more biology, etc., to the detriment of literature and history. Its probable effect on the average human being would be to narrow the range of his thoughts and make him more than ever contemptuous of such knowledge as he did not possess: and his political reactions would probably be somewhat less intelligent than those of an illiterate peasant who retained a few historical memories and a fairly sound aesthetic sense.

Clearly, scientific education ought to mean the implanting of a rational, sceptical, experimental habit of mind. It ought to mean acquiring a method — a method that can be used on any problem that one meets — and not simply piling up a lot of facts. Put it in those words, and the apologist of scientific education will usually agree. Press him further, ask him to particularize, and somehow it always turns out that scientific education means more attention to the sciences, in other words — more facts. The idea that science means a way of looking at the world, and not simply a body of knowledge, is in practice strongly resisted. I think sheer professional jealousy is part of the reason for this. For if science is simply a method or an attitude, so that anyone whose thought-processes are sufficiently rational can in some sense be described as a scientist — what then becomes of the enormous prestige now enjoyed by the chemist, the physicist, etc. and his claim to be somehow wiser than the rest of us?

3. To what extent do your own views on the nature of science coincide with Orwell's? What would you like to add to the above to make it relevant to the present day?
4. Orwell here points out to the need for an alternative way of educating scientists. What according to you are the problems of science education in the Indian school system?
5. What according to you is the most exciting topic in your own M.Sc/MA/MSW course? Write about it briefly in a manner that will attract young people at the high school level.

SECTION-C

6. Write a brief essay on any five characteristics of good scientific writing: (5 marks)