
Monday, 30 May 2016, 09:00–12:00

Paper HPS/1**HISTORY AND PHILOSOPHY OF SCIENCE (1)****History of Science**

Before you begin, read these instructions carefully.

Answer **one** question from **Section A** and **three** questions from **Section B**.

Begin each answer on a separate sheet.

*Write legibly and on only **one** side of the paper.*

Answers must be tied up in separate bundles, marked 1, 2, 3, etc. according to the question number.

*Attach a completed coversheet to each bundle and complete a master coversheet listing all questions attempted. It is essential that you write your examination number and **not** your name on the cover sheet and on **each** bundle.*

STATIONERY REQUIREMENTS

Script paper, blue coversheets, yellow master coversheet, and tags.

You may not start to read the questions printed on the subsequent pages of this question paper until instructed to do so.

SECTION A

1. "Change in the sciences has been driven more by theoretical than by practical innovations." Assess this claim.
2. When did modern science begin?

SECTION B

3. What did natural philosophers and physicians learn from books that they could not learn from experience between 1500 and 1700?
4. "Throughout the scientific circles of western Europe in the first half of the seventeenth century we can observe what appears to be a spontaneous movement towards a mechanical conception of nature." (R.S. Westfall) Why did any seventeenth century natural philosophers adopt the mechanical philosophy?
5. "To discourse of God from the appearances of things, does certainly belong to Natural Philosophy." Discuss the relation between religion and science in Newton's natural philosophy.
6. Why was there public support for the work of natural philosophers during the eighteenth century?
7. To what extent was Charles Darwin's work and career typical of British science in the period?
8. How and why did theories about the cause of disease change between the mid-19th and the early 20th centuries?
9. "Pathological anatomy around 1800 and bacteriology around 1900 were much the same, except that in the latter disease entered the body from outside." Assess this claim.
10. What objections to scientific and technological development were raised in the 1960s and 70s? Why did they arise?
11. Assess the strengths and weaknesses of describing change in the life and medical sciences since 1900 as "molecularisation".
12. In 1945, the White House proclaimed that the atom bomb was "the greatest achievement of organised science in history." Was that true then, and is it still true now?

END OF PAPER

Tuesday, 31 May 2016, 09:00–12:00

Paper HPS/2

HISTORY AND PHILOSOPHY OF SCIENCE (2)

Philosophy of Science

Before you begin, read these instructions carefully.

*Answer **one** question from **Section A** and **three** questions from **Section B**.*

Begin each answer on a separate sheet.

*Write legibly and on only **one** side of the paper.*

Answers must be tied up in separate bundles, marked 1, 2, 3, etc. according to the question number.

*Attach a completed coversheet to each bundle and complete a master coversheet listing all questions attempted. It is essential that you write your examination number and **not** your name on the cover sheet and on **each** bundle.*

STATIONERY REQUIREMENTS

Script paper, blue coversheets, yellow master coversheet, and tags.

You may not start to read the questions printed on the subsequent pages of this question paper until instructed to do so.

SECTION A

1. Is the method of physics applicable to all other sciences?
2. Are there revolutions in science?

SECTION B

3. Can science do without induction?
4. Does it matter for a theory of scientific method that science is a communal activity?
5. If the Kuhnian scheme of scientific development is correct, can there be Popperian falsification of theories?
6. "The only principle that does not inhibit progress is: *anything goes*." (Paul Feyerabend) Discuss.
7. Is a realist attitude justified towards the theories of modern physics?
8. Can the social sciences be truly scientific?
9. Is understanding the brain sufficient for understanding the mind?
10. Does modern evolutionary theory show that 'human nature' is a myth?
11. Should moral or political values inform science?
12. Is it ever reasonable to believe the truth of P on the basis of the fact that P is the best explanation of Q ? Discuss with reference to at least one example.

END OF PAPER