

NST1 NATURAL SCIENCES TRIPOS Part IB

Monday, 5 June 2017, 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. How and why has training in the sciences changed over the centuries?

2. Does history show that industrial and commercial growth foster the sciences, or vice versa?

SECTION B

3. How did new kinds of instrumentation change astronomy and natural philosophy in seventeenth century Europe?

4. What was the difference between medical and philosophical inquiry in early modern Europe?

5. What effect did the French Revolution have on the development of the natural sciences?

6. Is 'The Age of Discovery' a good label for the eighteenth century?

7. What do the histories of evolution and/or energy show about the relations between science and religion in the nineteenth century?

8. How, and with what consequences, has the science of human heredity changed since 1850?

9. What was colonial about colonial medicine?

10. Why was the oral contraceptive pill made for women to take?

11. 'The history of ecology shows that it is inseparable from politics.' Do you agree? Why or why not?

12. How did science and medicine in post-1949 China reflect Cold War politics?

END OF PAPER



NST1 NATURAL SCIENCES TRIPOS Part IB

Tuesday, 6 June 2017, 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 science special?

2. If you could change one aspect of scientific practice on the basis of philosophy of science, what would it be and why?

SECTION B

3. Does Kuhnian incommensurability imply that science cannot attain truth about the natural world?

4. Does falsificationism offer a viable alternative to inductivism?

5. 'Objectivity of science comes from its communal norms rather than from its method.' Discuss.

6. How does physics make progress, despite the fact that most of the objects treated in physical theories are unobservable?

7. How should we understand the meaning of mental state terms, such as 'beliefs' and 'desires'?

8. 'Smokers are more likely than non-smokers to get lung cancer; therefore, smoking causes lung cancer.' Discuss.

9. When and why should scientists tolerate dissent?

10. Is 'inference to the best explanation' a distinctive form of inference? Is it justifiable?

11. Should the results of medical science be protected by intellectual property laws? Why or why not?

12. 'Modern evolutionary accounts of human origins continue to reflect the belief that there is an essential human nature, the nature all people share through their common root.' Discuss.

END OF PAPER