
Monday 31 May 2004

1.30pm-4.30pm

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 chosen 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 number of the question.

*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 coversheet and on **each** bundle.*

<p>You may not start to read the questions printed on the subsequent pages of this question paper until instructed that you may do so by the Invigilator</p>
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HISTORY AND PHILOSOPHY OF SCIENCE (1): History of Science

SECTION A

- 1 “Though historical writings on the sciences have traditionally given practitioners the leading parts, their audiences have in fact played more important roles.” Discuss.
- 2 What general turning points, if any, should be recognised in the history of the sciences?

SECTION B

- 3 How did new instruments change astronomy between 1500 and 1650?
- 4 Compare the different meanings of ‘anatomy’ for William Harvey and Robert Fludd.
- 5 **Either** (a) Were there any significant connexions between the concerns of manufacturers and of natural philosophers in the seventeenth and eighteenth centuries?
Or (b) How did precision measurement affect the sciences of chemistry and of electricity in the eighteenth century?
- 6 “No vestige of a beginning, no prospect of an end.” (JAMES HUTTON, 1785) How did naturalists’ attitude to Scriptural history change between 1650 and 1800?
- 7 **Either** (a) How does the history of medicine reflect general changes in the sciences in the decades around 1800?
Or (b) Using tuberculosis as your example, describe and explain how views of disease changed between the eighteenth and the end of the nineteenth century.
- 8 Explain German physicists’ antipathy to *Naturphilosophie*.
- 9 Was the Manhattan Project a triumph of engineering, rather than of science?
- 10 How did relationships between science and its publics change after 1945?
- 11 **Either** (a) How does the history of the oral contraceptive pill illuminate the role of women in the history of science and technology?
Or (b) “Freud is the Darwin of the Mind.” (ERNEST JONES) Why did he have this reputation?

END OF PAPER

Tuesday 1 June 2004

9am-12noon

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 chosen 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 number of the question.

*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 coversheet and on **each** bundle.*

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HISTORY AND PHILOSOPHY OF SCIENCE (2): Philosophy of Science

SECTION A

- 1 “Historians worry about why scientists believe what they do; philosophers worry about whether these beliefs are true.” Discuss.
- 2 Is scientific reasoning fundamentally different from common sense?

SECTION B

- 3 “I can now prove that two human hands exist. How? By holding up my two hands, and saying, as I make a gesture with the right hand, ‘Here is one hand’, and adding, as I make a certain gesture with the left, ‘and here is another’. By doing this, I have, at the same time, proved the existence of external things.” (G.E. MOORE) Is this a convincing response to the sceptic?
- 4 **Either** (a) Does the rationality of induction depend on whether it is reliable?
Or (b) Do laws of nature explain regularities in nature?
- 5 Critically assess Lewis’s counterfactual theory of causation.
- 6 Is it better to believe that a theory is true, than to believe that its observable consequences are true?
- 7 **Either** (a) Does the raven paradox show that no observation is irrelevant to a hypothesis?
Or (b) What does explanation have to do with inference?
- 8 **Either** (a) What is the significance of a failed prediction?
Or (b) Has Kuhn shown that science is not methodological?
- 9 Are there any good reasons to think animals have rights?
- 10 “Mental terms such as ‘belief’ and ‘desire’ refer to inner, private, psychological events and should play no role in scientific psychology.” Discuss.
- 11 Does the sociology of scientific knowledge reduce science to politics?

END OF PAPER