

NST1

Natural Sciences Tripos Part IB (2024)

Paper HPS/1

HISTORY AND PHILOSOPHY OF SCIENCE (1)

History of Science

You should answer four questions in total. Answer one question from Section A and three questions from Section B. All questions carry equal weighting. You must not reuse portions of text from one answer in another answer.

You should spend no more than three hours on answering all the questions, and a word limit is set of no more than 1,500 words per answer.

All your answers for this paper should be submitted in one DOC, DOCX or PDF document. Each answer should be clearly headed with the question number and the question.

Put your Blind Grading Number (BGN) at the start of the document. Do not put your name anywhere in the document.

SECTION A

1. Is revolution a useful term in describing scientific change?
2. How did technologies of communication shape the sciences?

SECTION B

3. Discuss the role of the Americas in the making of early modern science and medicine.
4. What was the role of experiment in the development of early modern knowledge?
5. What was the role of translation in knowing nature in early modern Asia?

6. “Between 1600 and 1800, natural knowledge-makers became less interested in *qualities*, and more interested in *quantities*.” Is this a fair assessment?
7. Was industrialisation the most important factor in the development of the sciences in the nineteenth century?
8. How were hospitals in early-nineteenth-century France like museums, and why did that matter?
9. How does the history of geology reflect relationships between science and empire in the nineteenth century?
10. How did science shape the Cold War?
11. Why did the concept of “biodiversity” become influential in the second half of the twentieth century?
12. What useful insights, if any, can the history of climate science bring to policy today?

END OF PAPER

NST1

Natural Sciences Tripos Part IB (2024)

Paper HPS/2

HISTORY AND PHILOSOPHY OF SCIENCE (2)

Philosophy of Science

You should answer four questions in total. Answer one question from Section A and three questions from Section B. All questions carry equal weighting. You must not reuse portions of text from one answer in another answer.

You should spend no more than three hours on answering all the questions, and a word limit is set of no more than 1,500 words per answer.

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SECTION A

1. "Value-laden knowledge is not trustworthy." Discuss.
2. Is science just whatever scientists do?

SECTION B

3. Is it ever possible to show a scientific hypothesis to be false? And does it matter?
4. "Non-replicable single occurrences are of no significance to science." Do you agree?
5. What positive role, if any, do social factors play in the sciences? Discuss in relation to a specific example.

6. Is psychiatry fundamentally different from other areas of medicine?
7. Does consciousness pose a unique problem for the scientific study of the mind?
8. Name and discuss one specific way in which developments in physics have altered our understanding of time.

OR

“Philosophy makes no material contribution to physics.” Discuss.

9. Are there special challenges that *all* and *only* social sciences face?
10. Is there ever a good reason to censor scientists?
11. What is the most problematic aspect of the precautionary principle?
12. Are species individuals?

END OF PAPER