

NST1

Natural Sciences Tripos Part IB

**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 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 Grade Number (BGN) at the start of the document. Do not put your name anywhere in the document.

### **SECTION A**

1. How have gender roles shaped the making of science and/or medicine?
2. Was colonialism the main driving force behind the development of natural knowledge between 1500 and 1950?

### **SECTION B**

3. Was the early modern period an age of discoveries and inventions?
4. Was Isaac Newton the typical early modern natural philosopher?
5. How did the Enlightenment transform scientific practice?
6. How did early modern natural philosophers set themselves apart from their medieval predecessors?

7. How, if at all, did imperial competition have an impact on the history of medical sciences in the late nineteenth and early twentieth centuries?
8. What was at stake in stratigraphic work during the nineteenth century?
9. How did chemical industries support national self-sufficiency in the twentieth century?
10. Did molecular perspectives on heredity put an end to eugenic thinking?
11. In what way did patients get more of a say over medical research since the 1970s?
12. Is “the Anthropocene” a productive term to think about the world we live in?

**END OF PAPER**

NST1

Natural Sciences Tripos Part IB

**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 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.

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### **SECTION A**

1. Are there any features shared by all, and only, the sciences?
2. Do values influence scientific reasoning?

### **SECTION B**

3. Should we use public money to pay for curiosity-driven research?
4. Should theories in physics be empirically testable?
5. Is there such a thing as “absolute space”?
6. “No proper scientific explanation of social phenomena is possible.” Discuss.
7. What is the explanatory gap? Can it be bridged?

8. Is there any sense in which natural selection requires struggle?
9. "If falsificationism were as problematic as philosophers have suggested, it would never have been as popular among scientists." Discuss.
10. According to Kuhn, what is it that changes when a scientific revolution happens?
11. To what extent is pluralism compatible with objectivity?
12. Is evidence from randomised trials necessary and sufficient to conclude that a medical intervention is effective?

**END OF PAPER**