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.

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.
HISTORY AND PHILOSOPHY OF SCIENCE (1)

History of Science

SECTION A

1. How has the relationship between the sciences and mathematics changed throughout history?

2. What is the difference, if any, between the history of science and the history of technology?

SECTION B

3. Either (a) Was there a scientific revolution in sixteenth-century and seventeenth-century Europe?

   Or (b) What effects did new societies and academies have on natural philosophy in seventeenth-century and eighteenth-century Europe?

4. Either (a) ‘Between 1500 and 1700 medical ideas changed more than medical practices.’ Discuss.

   Or (b) Why did the stethoscope become the emblematic instrument of the Clinical School of post-revolutionary Paris?

5. Either (a) ‘Thus entrenched as the Cartesian system was, it was not to be wondered at that the doctrines of Newton’s *Principia* were distrustfully received.’ (David Brewster, *Life of Newton*, 1831). Discuss.

   Or (b) Were botanic gardens more significant than chemical laboratories for the development of natural knowledge in eighteenth-century Europe?

6. How did the medical community come to accept that many diseases are caused by specific micro-organisms?

7. ‘In the nineteenth century the “is” of nature was being made a justification for the “ought” of politics, and vice versa.’ Discuss.

8. Compare and contrast the institutionalisation of physics in Britain and Germany.

9. Critically assess Mendel’s status as a discoverer.

PLEASE TURN OVER/
Either (a) ‘Psychiatry has always been a mixture of fads, fashions and torture.’ Is this true?

Or (b) ‘Freud, not Einstein, was the greatest scientist of the twentieth century.’ Discuss.

Either (a) What difference have patients' demands made to biomedical technologies since World War II? Discuss with reference to sickle cell anaemia AND the oral contraceptive pill.

Or (b) Why isn't there a contraceptive pill for men? Provide a historical answer.
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HISTORY AND PHILOSOPHY OF SCIENCE (2)

Philosophy of Science

SECTION A

1 Which is more likely to be true: science or common sense?

2 What is the relationship between the philosophy of science and scientific practice?

SECTION B

3 What do the paradoxes of confirmation teach us about how scientists test their theories?

4 Either (a) Who comes closer to telling the truth about science: Popper or Kuhn?
   
   Or (b) Does the fact that past scientific theories have been false give any reason for saying that future scientific theories will be false as well?

5 What is the best solution to the problem of induction? Does it work?

6 Can scepticism about the external world be defeated?

7 Can the “Experimenters’ Regress” be avoided?

8 Is all scientific knowledge local?

9 “If the first object had not been, the second never had existed.” Is this a good theory of causation?

10 Either (a) Critically assess the ‘Best System’ view of natural laws.
   
   Or (b) What is the relationship between explanation and prediction?

11 Who should decide what scientific research to fund?

END OF PAPER