PHILOSOPHY TRIPOS   Part IB

Thursday 28 May 2009   13.30 to 16.30

Paper 6

PHILOSOPHY OF SCIENCE

Answer **three** *questions only*.

Write the number of the question at the beginning of each answer. If you are answering an either/or question, indicate the letter as well.

STATIONERY REQUIREMENTS
20 Page Answer Book x 1
Rough Work Pad

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

1   **Either** *(a)* Can the same theoretical term occur in more than one scientific theory with the same meaning?

          Or   *(b)* How might one defend the distinction between observational and theoretical terms?

2   Is there a distinction between the theory-ladenness of observation and the theory-ladenness of observation statements?

3   **Either** *(a)* Does scientific explanation require laws of nature?

          Or   *(b)* Is a better explanation more likely to be true?

4   **Either** *(a)* What, if anything, would confirm the hypothesis that all ravens are black?

          Or   *(b)* Is the possibility of grue emeralds really a 'new riddle' of induction?

5   Is the falsification of a scientific theory just a matter of convention?

6   What role do exemplars play in scientific revolutions?

7   Does the claim 'electrons have spin' attribute a property to electrons?

8   What distinguishes a law of nature from a universal regularity that is not a law?

9   **Either** *(a)* What is the relationship between probability and betting behaviour?

          Or   *(b)* What is the relationship between probability and long-run frequencies?

10   What, if anything, demarcates science from pseudo-science?

END OF PAPER