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