

PHILOSOPHY TRIPOS Part IB

Wednesday 29th May 2013

09.00 – 12.00

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. Does science aim at truth or at empirical adequacy?
2. EITHER: a) Is Popper right that induction is not required for science?

OR: b) Is falsifiability a necessary and/or sufficient condition for a theory to count as scientific?
3. 'A scientific research programme can be evaluated, but an individual claim within it cannot.' Discuss.
4. Are biological species natural kinds?
5. Is there a tenable distinction between 'proximate' and 'ultimate' causes in biology?
6. If the world is 'just one thing after another' can there be any laws of nature?
7. Need explanation be causal explanation?
8. In what sense, if any, is probability a guide to life?
9. Describe the EPR thought experiment, and explain why Einstein took it to provide an argument that Quantum Mechanics provides an incomplete description of physical reality. Was he right?
10. Describe a thought experiment which shows how the Principle of Relativity and Maxwell's Laws together imply the time dilation and length contraction effects of Special Relativity. Are these absolute or frame-dependent effects?

END OF PAPER