UNIVERSITY OF LONDON

BA EXAMINATION 2006

for Internal Students

This paper is also taken by Combined Studies Students

PHILOSOPHY

Optional subject (f): Philosophy of Science

Answer THREE questions. Avoid overlap in your answers

1. Did Popper solve Hume's problem of induction?

2. Is the problem of old evidence really a problem for Bayesians?

3. What is the so-called syntactic view of theories? Discuss its main internal problems.

4. 'Lawfulness is a matter of imputation: when an empirical generalisation is designated as a law, this epistemological status is imputed to it. Lawfulness is something which a generalisation could not in principle earn on the basis of warrant by the empirical facts.' Discuss.

5. EITHER (a) Can the 'best system' account of laws of nature solve the problem of vacuous laws?

   OR (b) What distinguishes a law from an accidentally true generalisation?

6. What, if anything, is wrong with the DN model of explanation?

7. 'Unification is great. But is it explanation?' Discuss.

TURN OVER

8. EITHER (a) ‘Even though physics cannot explain the properties of very complicated molecules like DNA in terms of the quantum mechanics of electrons, nuclei, and electric forces, and even though chemistry survives to deal with such problems with its own language and concepts, still there are no autonomous principles of chemistry that are simply independent truths, not resting on deeper principles of physics.’ Discuss.

OR (b) Does one scientific theory ever reductively explain another?

9. What is inference to the best explanation? Can it be justified from a naturalistic point of view?

10. EITHER (a) Is Maxwell’s attack on the observable/unobservable distinction successful? If it is, does this undermine van Fraassen’s constructive empiricism?

OR (b) ‘We are not justified in believing that electrons, quarks and other unobservable entities really exist.’ Discuss.

11. What are Kuhn’s reasons to think that the shifts in scientific revolutions are not wholly rational? Do those reasons show that such shifts involve violations of rationality?

12. Do Bayes’ nets provide a complete account of causality?

13. Are there any convincing arguments in favour of relativism about scientific claims?

14. ‘If there were no material things, there would be no space and no time.’ Discuss.

END OF PAPER