

UNIVERSITY OF LONDON

M. PHIL. EXAMINATION 1999 for Internal Students

PHILOSOPHY

Monday, 10 May. 10.00 - 1.00.

Foundations of Probability & Inductive Logic

Answer THREE questions.

1. EITHER (a) What is the ‘principle of indifference’? Are the arguments against it devastating?

OR (b) Outline Carnap's attempt to produce a logical interpretation of the probability calculus. Has the attempt been conclusively refuted?

2. Sketch and critically assess one way in which the subjectivist approach attempts to justify the axioms of probability. Give a detailed proof of the axiom of additivity from this approach.

3. Can the personalist Bayesian make sense of ‘objective chances’?

4. Critically discuss the limiting relative frequency interpretation of the probability calculus.

5. Critically evaluate one version of the propensity interpretation of the probability calculus.

6. What argument, if any, can the Bayesian give for the ‘principle of conditionalization’ as a mechanism for changes in rational belief?

7. Can any sense be made of the notion of a random sequence?

8. ‘Without constraints on the “priors”, Bayesianism is hopeless; but no set of constraints can be established as rationally compelling.’ Discuss.

9. Is there any justification for standard statistical significance test methodology?

10. Discuss the problem of handling uncertainty in expert systems.

11. Discuss how successful personalist Bayesianism is in handling one or more of the following problems: (i) the paradox of the ravens; (ii) the Duhem-Quine problem; (iii) the 'problem of old evidence'.

END OF PAPER