

**BA EXAMINATION 2002**

for Internal Students

This paper is also taken by Combined Studies Students

**PHILOSOPHY**

Optional subject (f): Philosophy of Science

Wednesday, 15 May 2002: 10.00 – 1.00

Answer THREE questions. Avoid overlap in your answers.

1. 'Observable entities can be referred to by theoretical terms, so the standard theory/observation distinction is a mistake.' Discuss.
2. Why is it wrong to explain the length of the flagpole by the length of the shadow?
3. A generalization G is deducible from a theory T. What further conditions, if any, must be satisfied for it to be the case that T explains why G holds?
4. 'Theories compete only if they are incompatible. Hence competing theories are not incommensurable.' Discuss.
5. 'Instrumentalists make weaker claims than realists; the former, therefore, are more likely to be correct.' Discuss.
6. 'All past theories have turned out to be mistaken. So current theories are no doubt wrong too.' Discuss.
7. Do social explanations of scientific theorising discredit scientific realism?
8. In what sense, if any, is physics the fundamental science?
9. Is use of the concept of probability within scientific theories incompatible with determinism?
10. What is the best interpretation of quantum mechanics?
11. What are the units of natural selection?
12. 'Evolution removes the last vestiges of teleology from our picture of the natural world.' Discuss.

13. Can features of human society and human psychology be explained by means of natural selection?
14. Assess Leibniz's arguments against Newton's conception of absolute space.

**TURN OVER**

15. What is the difference between Newton's space and time and so-called Neo-Newtonian space-time?
16. 'Space-time is absolute in some respects, and not absolute in other respects, in Einstein's General Theory of Relativity.' Discuss.
17. 'Scientific methodology requires only that particular cases can falsify general theories, not that they can confirm them.' Discuss.
18. What is Bayesian conditionalization? Is it demanded by rationality?
19. 'Bayesian methodology is worthless if no restrictions beyond coherence are placed on prior probabilities.' Discuss.

**END OF PAPER**