PHILOSOPHY TRIPOS   Part IB

Monday 28 May 2012   09.00 to 12.00

Paper 2

LOGIC

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)*   'The use of words is to be sensible marks of ideas, and the ideas they stand for are their proper and immediate signification.' Discuss.

    Or   *(b)*   In what sense of 'convention', if any, is it true that meaning is fixed by convention?

2   Can a theory of truth provide a satisfactory account of meaning?

3   **Either**   *(a)*   Must we quantify over a domain?

    Or   *(b)*   How did Frege solve the problem of multiple generality?

4   'Valid arguments in English are valid in virtue of their logical form. Similarly, invalid arguments are invalid in virtue of their logical form.' Discuss.

5   **Either**   *(a)*   Are empty names such as 'Vulcan' a problem for a semantic theory?

    Or   *(b)*   Is Frege's semantics committed to an infinite hierarchy of senses? Why does it matter?

6   How much must we know about something for our words to denote it?

7   What is the law of excluded middle? Is it a logical truth?

8   Attempt all parts of this question.

    (a)   Describe a language for propositional modal logic.
    (b)   Expound a Kripke semantics for the language using the idea of truth at a world in a Kripke frame, under a valuation. Define the notions of logical truth and logical consequence.
    (c)   Describe a Kripke frame and a valuation according to which $\Box A \rightarrow \Box\Box A$ is false at some world in the frame, under the valuation.

9   'A theory of possible worlds cannot do without primitive modality, since *possible world* is itself a modal notion. But the theory is none the worse for that.' Discuss.

10 How, if at all, can one prove the consistency of a mathematical theory?

END OF PAPER