THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Summer 2015 examination

PHXXX
Philosophy of Science

MOCK EXAM – For Student Preparation Only

Instructions to candidates

This paper contains three sections, each weighted equally. Section A contains ten short-answer questions. Answer all of them. Section B contains essay questions from Weeks 1-10. Answer one of them. Section C consists of essay questions from Weeks 11-20. Answer one of them.

Time Allowed *3 hours*

Calculators: *Calculators are not allowed in this examination*

SECTION A - Short Answer Questions. Answer all 10 questions from this section.

1 What was the scientific revolution?

2 What is the significance of an 'anomaly' in the Kuhnian picture of theory change?

3 Explain the role of positive and negative heuristics in Lakatos' Scientific Research Programmes.

4 What is structural realism in the context of the Scientific Realism debate?

5 How does the Best Systems view of laws distinguish a law of nature from a mere regularity?

6 What is Cartwright's argument against Wild-to-Laboratory (crosswise) reduction?

7 Why does Wigner say that the effectiveness of mathematics in science is 'unreasonable'?

8 What is the Causal Mechanistic model of explanation?

9 Describe McMahan's time-symmetry test for understanding the occurrence of death and illustrate its application with an example.

10 Explain the 'massive modularity' hypothesis as it has been proposed in evolutionary psychology.

SECTION B - Essay Questions (Weeks 1-10): Answer one question from this section.

1 Evaluate the major criticisms of logical empiricism.

2 Is the syntactic view of theories plausible?

3 Is modern science the product of a Kuhnian revolution?

4 Are our best scientific theories approximately true?

5 Which idealisations (if any) are illegitimate?

6 Which phenomena (if any) are governed by laws of nature?

7 Are all laws of nature reducible to fundamental laws?

8 Can probability be identified with the relative frequencies of actual occurences?

SECTION C - Essay Questions (Weeks 11-20): Answer one question from this section.

1 What are the characteristics of good inductive reasoning?

2 How does science explain?

3 How does science provide effective representations of the world?

4 Evaluate causal fundamentalism.

5 In what sense (if any) does a theory of physics require interpretation?

6 What is an appropriate definition of life?

7 What is an appropriate definition of death?

8 Is evolutionary psychology a plausible way to understand human psychology?