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# PHIL 145 Fall 2016
## Exam 1

*General Directions:* There are three sections. Please answer all of the questions. All answers are to be given on the test itself. Make sure to place your name and ID# on the top of all the pages.

*Section I:* Select the best answer for each question. (1 pt each)

1. What two goals is the demarcation problem trying to solve?
   (X) Describe what science is and justify the authority of science
   (b) Describe what science is and uncover the truth
   (c) Eliminate misguided theories and justify the authority of science
   (d) Eliminate misguided theories and uncover the truth

2. One reason the demarcation criteria "Science is what is produced by the scientific method" fails is because:
   (a) It rules out fields like astronomy, field biology, and paleontology
   (b) Not everything scientists do is science
   (X) Science is constantly changing
   (d) There is no scientific method

3. On reason the demarcation criteria "Scientists perform experiments" fails is because:
   (a) There is no scientific method
   (b) Science is constantly changing
   (c) Not everything scientists do is science
   (X) It rules out fields like astronomy, field biology, and paleontology

4. What does empiricism place primary importance on?
   (X) Observations
   (b) Arguments
   (c) Progress
   (d) Truth

5. The placebo effect is an example of the fact that:
   (a) Holding scientific beliefs doesn't systematically affect observations
   (X) Holding scientific beliefs can systematically affect observations
   (c) Science is reliable
   (d) That theory-laden observations offer a solution to the problem of induction

6. The Boston beer experiment showed that our observations could be influenced by:
   (X) Expectations
   (b) Training
   (c) Illusions
   (d) Experts

7. Why might x-ray technicians observe a scan differently than laypersons?
      (a) They don't, they only think they do
      (b) They don't, but we think they do
      (c) They have better eyesight
      (X) They have received training

8. What type of argument uses past experiences as evidence for future events?
      (a) Deductive reasoning
      (X) Inductive reasoning
      (c) Social reasoning
      (d) Theory laden reasoning

9. A lack of consensus is characteristic of:
      (X) Pre-paradigm science
      (b) Normal science
      (c) Paradigms
      (d) Kuhnian science

10. For Kuhn, what is a distinctive feature of a seminal, exemplar work?
      (a) They instigate a crisis state
      (b) That they answer more questions than their competitors
      (c) That they answer all the questions
      (X) That they never answer all the questions

*Section II*: Fill in the blank with the best word or phrase to complete the following sentences. (2 pts each)

1. A philosophic argument consists of _premises_____ that support a conclusion.

2. If, Popper's demarcation criterion of _falsification__ was valid, then we should be able to

design a crucial test for any given theory.

3. In the empiricist attitude, _observations_____ motivates inquiry and adjudicates the

plausibility of hypotheses.

4. In a(n) _deductive___ argument, the truth of the premises guarantees the truth of the

conclusion.

5. Hume argued that we never directly observe causes, we only observe __constant

conjunction_____.

6. Simplicity, scope, and explanatory power are examples of ___epistemic_____ values.

7. Rather than look at the logical structure of reasoning and evidence, Kuhn looked at

___history/sociology_of science_____ to form his understanding of science.

8. According to Kuhn, the core assumptions, methods and areas of investigation shared by a

community of scientists are all part of a __pardigm_____.

9. According to Kuhn, "normal science" is mostly a matter of __puzzle solving_____.

10. Two theories exhibit _____transient_____ underdetermination when they

have predictive differences but we haven't obtained the data yet.

11. According to Douglas, values should never function as _reasons___ for a claim.

12. By insisting that scientific results be repeated, checked, and reviewed we can never

____eliminate__ risk, we can only manage it.


*Section III*: Answer each of the following questions. (4 pts each)

1. What does it mean to say that science is fallible?

That it can be wrong


2. What is one reason the demarcation criteria "science is testable" fails?

Because there are many things that are testable that are not science

3. What do we mean when we say observations could be theory-laden?

That our beliefs can affect our observations

4. What is the problem of induction?

That there is no good reason to believe that future events will be like past events

5. What does Kuhn mean by incommensurability?

That there is no way to determine if one paradigm is better than another

6. What must happen for normal science to give way to a scientific revolution?

There must be a crisis state and there must be an alternative exemplar

7. What broader lessons for science can we learn from the contributions of Jayne Goodall and Diane Fossey to primatology?

That having scientists from diverse backgrounds is good for science

8. Why is the value-free ideal a bad ideal?

Because it can not be achieved and it is not desirable

Bonus Questions. (1 pt each)

1. When was the causal connection between cigarette smoking and lung cancer established?
1905s

2. What is Kuhn's first name?
Thomas

3. Where does Heather Douglas currently work?
The University of Waterloo