

Exam question database

By the end of the year, there will be somewhere between 7 and 10 clusters of questions. I will pick 6 clusters. From those 6, you will select one question from each cluster to answer. The total number of questions you will answer will be 6. The word count for each question is between 250-500 words. Don't go over the word count!

Cluster 1) Pick one of the following three questions to prepare for the final.

- A) How does Popper address the problem of induction? Does he solve it or step around it? Given his approach to induction, how does he propose we obtain scientific knowledge? Give one criticism of Popper's approach to induction.
- B) In Popper's conclusions, he states that "Confirmations should count only if they are the result of *risky predictions* . . ." [page number forthcoming]. What is the difference between a risky and a safe prediction? Give examples of each. Why might Popper believe that riskiness increases the scientific status of a theory? How might the "riskiness criterion" be related to his critique of verification/confirmation?
- C) Peter Lipton discusses the descriptive problem of induction. What is the descriptive problem of induction according to Lipton? Give three accounts of induction found in his article, and explain one problem for each account.

Cluster 2) Pick one of the following three questions to prepare for the final.

- A) Popper was conflicted about confirmation. You can find, in his article, several instances where he talks about confirmation in different ways. What are these different ways? What are the consequences of these different ways of thinking about confirmation? Can at least one of Popper's statement on confirmation explain why we'd prefer a plane that has been tested by mechanics to one tested by a tarot card reader?
- B) Outline Thagard's objection to Bok, Jerome, and Kurtz's statement on the demarcation criteria. Do Thagard's objections hold any water? Explain. Can you offer stronger arguments against Bok, Jerome, and Kurtz? Be sure to give examples.
- C) Thagard claims that we need to look at three things in order to determine whether a discipline is a pseudoscience. Explain each one. Do you think Thagard's demarcation criteria is plausible? Explain the reason for your answer.

Cluster 3) Pick one of the following three questions to prepare for the final.

- A) Kitcher gives the example of a spiritual teacher who says, "Quietness is wholeness in the center of stillness." What is the point of this example? What does it function as an argument against? How does the argument work?
- B) When Hanson asks the question of whether two different people see the same thing, he considers the proposal that they see the same thing but interpret it differently. What is Hanson's argument against this proposal? What are some implications of Hanson's view for the testability of theories?
- C) Creationists express skepticism about evolutionary biology because they say it doesn't have conclusive proof. Explain the dilemma this creates. Does proof have to be conclusive for a theory to be acceptable, according to Kitcher? What about according to you? Briefly explain the difference between possible and warranted skepticism, and discuss whether the creationists, as presented by Kitcher, use either in their criticism of evolution.

Cluster 4) Pick one of the following three questions to prepare for the final.

- A) Kuhn talks about incommensurability. What are the two types of incommensurability? How do these two types of incommensurability threaten objectivity?
- B) Why does Kuhn think that scientific change is noncumulative? What is his argument? Put this in your own words, with page numbers. Offer one criticism of his argument.
- C) How does Kuhn's argument from history work? Put this in your own words. No page number necessary since I drew this from his work overall. Offer two criticisms of this argument.

Cluster 5) Pick one of the following two questions to prepare for the final.

- A) Feyerabend and Popper use very different rhetorical styles to make their respective points. Describe these styles. How do these styles reflect their positions concerning the utility and epistemic value of the scientific enterprise?
- B) Feyerabend thinks that science is a tyrant which limits freedom of thought. What evidence does Feyerabend supply for thinking that science is a tyrant? Do you think that freedom, including freedom from truth, is as important as Feyerabend thinks it is? Why or why not?

Cluster 6) Pick one of the following four questions to prepare for the final.

- A) Longino describes several different notions of objectivity. What are these different notions (in your own words)? Which notion does she go with? Do you think that the type of objectivity Longino emphasizes will actually improve science? Why or why not?
- B) Longino offers criteria that an objective community must have. What are these criteria? Will these criteria, if followed, lead to a more objective science? Why or why not?
- C) How does Longino's views on objectivity differ from some of the other authors in this course (pick just one author for comparison)?
- D) Feyerabend espouses a theory of methodology that is radical in nature. Explain his approach to methodology. Provide an example of an academic discipline that presents a methodological problem, and offer an appropriate application of Feyerabend's theory. Does this make the discipline better or worse? (P.S. I think this is a really hard question, but one of you came up with it!). Try it if you think you can give a good and interesting answer.

Cluster 7) Pick one of the following 3 questions to prepare for the final.

- A) Realists often use an inference to the best explanation type of argument for the realistic interpretation of theories. How does the argument work? What are the competitor explanations? Which competitor is the best and why?
- B) Bas van Fraassen holds the view of constructive empiricism. What is this view? Why does Bas van Fraassen think that constructive empiricism is a better interpretation of science than realism? Do you think he's right?
- C) James Brown provides a description of what he means when he says that science is successful. What does he mean by the success of science? Please put this in your own words. How would Bas van Fraassen react to each part of Brown's description of success?

Cluster 8). Pick one of the following 2 questions to prepare for the final.

- A) What is Hempel and Oppenheim's Deductive-nomological model of explanation? Pick one criticism of this model and explain it? What could Hempel and Oppenheim say in response?
- B) Cartwright doesn't think that laws are needed for good explanations. Why does she think this?

Cluster 9) Pick one of the following 2 questions to prepare for the final.

- A) Subjective Bayesians think that the priors will “wash out.” What does this mean? Pick another author(s) covered in this course and use their view to argue that Subjective Bayesians are being naive (e.g., Longino, Kuhn). If there’s space (and there probably won’t be), say something about who is right.
- B) Bayesians think that they can provide answers to the tacking problem and the raven problem. What are these problems? What are the Bayesian solutions?