

Directions: Closed book, closed notes. Please answer everything in the exam booklet provided. Anything written on this sheet will not be graded

I. Terms: Please provide short answers (several sentences, up to a paragraph if necessary) describing and defining such terms. Do not provide critical analysis (“Just the facts, ma’am/sir.”) Choose 5 from the following 6 (@ 5 pts each).). If you do all 6 I’ll grade the best 5.

- a.) Methodological/Logical [a/]symmetry
- b.) Posterior/Prior Probability
- c.) Empirical adequacy (Both the “informal sense” and van Fraassen’s notion)
- d.) Methodology
- e.) Scientific Realism
- f.) Paradigm. **Aside from giving a concise definition (1-2 sentences) list what is encompassed by this concept, as described explicitly by Kuhn.**

ESSAY QUESTIONS: Please choose 2 from the following 3 (@25 pts each) and answer completely as possible

1.) Explain briefly what is meant by the “Problem of Demarcation.” Describe (without explaining in depth) the various criteria proposed by Popper, Lakatos, Kuhn, and Thagard. Make sure you specify: a) who argued that their criteria function only as necessary conditions, b) who argued that their criteria were both necessary and sufficient, c) who didn’t venture that far (i.e. believed the demarcation line is vague at best). Then, in a paragraph or two, argue why you think one the above four provide the most effective ‘solution’ or argue why all them fall short—i.e. , argue why you think the problem is unsolvable.

2.) Explain briefly what is meant by the problem of conceptual change and how Popper, Kuhn, and Laudan sought to deal with it. For the latter, simply give a brief description without explaining in depth their ‘takes’ or programmes. Feel free to use any convenient analogy concerning how the ‘ontology’ of their variously fundamental explanatory notions fit together. Then, in a paragraph or two, argue either: a) Why one of the above three has the most effective approach and why, or b) Why all of them fall short in significant ways. Feel free to mention (without explaining in much detail) whether or not you feel Giere/Nersessian have a better ‘take’ and why (or why not, i.e that you believe the problem of conceptual change is insurmountable).

3.) Explain briefly what is meant by scientific realism versus scientific anti-realism. Just give a few brief sentences here, without listing all of their garden varieties. Then, in the case of realism, state briefly (without explaining in depth) what Boyd’s essential take is (i.e. what underwrites Boyd’s “Lex Orandi Est Lex Credenti) and Ian Hacking’s essential take. In the case of anti-realism, describe without explaining in depth what Bas Van Fraassen’s (BVF’s) position is. Then, in a paragraph or two: a) Either argue for anti-Realism (wherein you may or may not agree with BVF¹ or for realism (where you’re welcome to defer to Boyd or Hacking and point out briefly why you think their arguments prove the most effective. b) Argue against the realism/anti-realism in which you defend Fine’s NOA stance and mention why you think Musgrove’s criticisms against Fine are unjustified.

¹ If you disagree with BVF, make sure you at least mention in passing Musgroves criticism against BVF