Exam 1

Philosophy 270

Fall 2009

Answer all questions. Leave a space between answers. You have 50 minutes.

1. [7 pts.] In Euclid, how does a postulate differ from (a) a definition, (b) a common notion, and (c) a proposition?

2. [3 pts.] In an ideal science, as conceived by Socrates, how would one explain why the earth is spherical? According to the "second best" method that Socrates actually uses, what is the explanation for why the earth is spherical?

3. [9 pts.] For each of the following, say (i) whether Plato would classify it as knowledge or opinion, and (ii) what kind of knowledge or opinion he would classify it as. Explain why he would classify them in these ways.

   (a) Thinking there is a desk at the front of the room on the basis of seeing it.
   (b) Thinking that the angles in a triangle make two right angles on the basis of reading the proof in Euclid.

4. [8 pts.] State Aristotle's definition of deduction. Give an example of something that is a deduction and something that isn't. Say why your non-example doesn't satisfy the definition.

5. [8 pts.] Can non-necessary truths be demonstrated, according to Aristotle? What is Aristotle's argument for his view about this?

6. [4 pts.] State how the concepts of definition and property are alike (other than in being attributes of a thing) and how they differ.

7. [4 pts.] If a stone is thrown upwards, is its motion in accordance with nature? Explain.

8. [8 pts.] How does Aristotle's view of the subject matter of mathematics differ from Plato's?

9. [4 pts.] Give a Ptolemaic argument that the earth has the ratio of a point to the heavens.

10. [7 pts.] What did Osiander say in the Foreword to *On the Revolutions*? Did Copernicus agree with this? Support your answer to the latter question with a quotation from Copernicus.

11. [20 pts.] How does Copernicus explain the following fact? How could Ptolemy explain it? Draw diagrams as appropriate.

    The distance traveled in retrograde motion increases in the following order:
    Saturn, Jupiter, Mars.

12. [9 pts.] Describe the methods that Bacon calls "anticipation of nature" and "interpretation of nature". Which did Bacon think was the method in use in his time? What is Bacon's attitude to these two methods?

13. [9 pts.] Bacon says science should aim to discover (a) forms, (b) latent processes, and (c) latent configurations. Explain what he means by these three things.

Keep this exam; just turn in your answers.
There is no class on Monday; the next class is Wednesday.