Write a short essay on one of the following three topics. Keep your answer to fewer than three pages typewritten and double-spaced, about 750 words. As before, employ citations and references clearly. Please use a cover page. This paper will be worth 25% of the grade on your exam.

(1) Arthur Koestler says “The Copernican universe is not only expanding towards the infinite but at the same time [it is] decentralized. It has no central orientation to which everything can be referred. The directions ‘up and down’ are no longer absolute, nor are weight and buoyancy.” Discuss and explain Koestler’s assertion.

(2) What did Macrobius (~430AD) mean when he talked about “…the golden chain which God…bad hang down from heaven to earth.” How does this concept relate to the idea that the medieval universe gave meaning and purpose to life on earth; “…a model so universally accepted…so intelligible, so satisfying to the imagination.”

(3) The Aristotelian model of the universe may be considered the epitome of teleological natural philosophy. Contrast this model to that constructed by Kepler, and comment on the philosophical aims of the two scientists. Were they answering the same questions?