

ISP 205
Review Questions, Week 14

This is not required homework. It will not be graded. Answers will be supplied next week.

1. What do we actually measure when we say that there is Cosmic Microwave Background (CMB) radiation?
2. How was the CMB produced?
3. What does it tell us about the overall history of the universe?
4. What do we mean by the term “Dark Matter”?
5. What are the three independent techniques, described in class, by which we detect the existence of Dark Matter?
6. What fraction of all matter is in the form of Dark Matter?
7. On the largest observed scale, what is the general distribution of matter in space? Is it just a uniform distribution, or does it have some particular structure to it? If the latter, what type of structure?
8. What is meant by “top-down” structure formation, and what is meant by “bottom-up” structure formation? Which seems to be the prevalent case in the actual universe?
9. What is a quasar?
10. What do quasars have to do with galaxies?
11. How do we know that the center of our own Milky Way galaxy contains a black hole with over a million solar masses of material inside it?