CRASH COURSE ASTRONOMY #39 GALAXIES PART 2 NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. In the 1960’s, 3C273 was first observed by an optical telescope but when observed by a radio telescope reveled that it was the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ thing seen at the time.
2. What does Quasi-stellar radio source stand for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What could power the immensely energetic galaxies?
4. During the 1980’s, the Hubble Space telescope found what out about black holes?
5. What location must an object reach in order to be pulled into a black hole?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. In accretion disk formation, what does the light bulb analogy represents?
7. In accretion disk formation, what is the energy source? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. Where in accretion disk formation do the jets escape?
9. We are part of a small group of galaxies known as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. What are the 2 brightest galaxies of our local group?
    1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. What is the shape of the local group? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. How far is the Andromeda Galaxy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. What type of shift is happening between our galaxy and the Andromeda Galaxy? \_\_\_\_\_\_\_\_\_\_\_\_
14. How many solar masses is the black hole in the Andromeda Galaxy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. How long do astronomers think it will take until the Milky Way Galaxy and the Andromeda Galaxy collide? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
16. What galaxy is closest to the Earth? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
17. What is a supercluster?
18. What supercluster are we a part of? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
19. Using deep field astronomy from the Hubble Space telescope we are able to extrapolate the number of galaxies as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, each with \_\_\_\_\_\_\_\_\_\_\_\_\_ of stars.