

Astr 511: Galactic Astronomy

Željko Ivezić, University of Washington, Winter Quarter 2013

MY NAME IS (print please!): _____

Final Exam

Each answer is worth 100,000 points (for a total of 1 million).

- 1) What do you know about Milky Way's interstellar medium?
- 2) Describe the main components used to model the Milky Way stellar distribution.
- 3) Describe metallicity and kinematics differences between these components.
- 4) Why is it interesting to study the kinematics of Milky Way stars?
- 5) Why is it interesting to study the chemical composition of Milky Way stars?
- 6) Describe the distribution of galaxies in absolute magnitude vs. optical color plane.
- 7) How can we observationally distinguish star-forming galaxies from galaxies with AGN activity?
- 8) Describe the C^- method.
- 9) Show that in a homogeneous universe, the number of sources brighter than some apparent magnitude m increases as $10^{0.6m}$.
- 10) Describe all evolutionary stages in which a star with effective temperature of 10,000 K and $[Fe/H] = -0.2$ could be.