

Astro 105 2020 Fall Exam III Study Guide

Topics (not exhaustive, but covers the most important material)

Accelerated Expansion
Age of universe (and the details)
Alan Guth
Big Bang Theory (and the evidence for it)
Big Crunch
Blazars
Clusters, Superclusters
Cosmic Horizon Distance
Cosmic Microwave Background Radiation (CMBR)
Cosmological Constant
Cosmological Redshift
Cosmology
Critical Matter Density
Dark energy
Dark matter
Doppler Redshift
Edwin Hubble
Electromagnetic force
Electroweak Theory
Four fundamental forces
Galactic collisions
Gamma-Ray Bursts
General Relativity (GR) theory, equation, and terms
Gravity force
High Energy Physics, Length Scales
Hubble flow
Hubble's Constant and Law
Inflation
Lawrence Krauss
Local Group
Matter-dominated and Radiation-dominated universe
Neutron Decay
Planck's Formula
Quasars
Quintessence (solution to fine-tuning problem)
Radio Galaxies
Recessional velocity

Richard Feynman, Feynman Diagrams
Special Relativity's Constraint on Fluctuating Objects
Steven Weinberg
Strong force
Superstrings and Brane Theory
Tully & Fisher's relation and law
Universe's possible structure (Hyperbolic, Flat, Spherical)
Vacuum energy
Wavelength Rule of Light
Weak force