Name	
1	/3
2	/5
3	/5
4	/4
5	/10
Total	/27

You may use one sheet of notes during this test. You may not have any books or other notes. Good luck.

Hubble's Law	$v = H D$
Kepler's 3rd Law	$P^2 = R^3/M$ (in AU, year, & M_{sun})
	$M = 233\ v^2\ R$ (in parsec, km/s, & M_{sun})
Redshift	$z = 1/a - 1$; $a = 1/(1+z)$
	$v = c\ z$; $v = c\ (\lambda_{rec}/\lambda_{emit} - 1)$
Number density	$ND(a) = ND(now)\ a^{-3}$.
Mass density	$MD(a) = MD(now)\ a^{-3}$ for matter.
	$MD(a) = MD(now)\ a^{-4}$ for radiation.
Wien's Law	$\lambda_{peak}\ T = \text{constant}$

Hubble's Constant	70 km/s/Mpc
Speed of Light	300,000 km/s
Parsec	3.09×10^{13} km
Astronomical Unit	1.50×10^{8} km
Year	3.16×10^{7} s