Midterm Exam
BUSI 521: Asset Pricing Theory
ECON 505: Financial Economics I
Spring 2022

This is a 1.25 hour exam. It is closed book and closed notes. Please write your student number on each page of your answers and staple them together.

(1) Explain the meaning of the following and prove it. Clearly state definitions of terms and any assumptions you make. "Risk premia depend on covariances with an SDF."
(2) Assume there are n risky assets (not necessarily joint normal). Assume there is a risk-free asset. Show that a mean-variance frontier portfolio return is a pricing factor. Clearly state definitions of terms and any assumptions you make.
(3) Derive a formula for the risk-free return when there is a representative investor with CRRA utility and the change in log consumption is normally distributed.
(4) What is the form of Pareto optimal sharing rules when all investors have log utility? Prove it.