MAC 2312 FINAL EXAM (9th Ed.)

① 5.1 – 5.10 (15) (Skip 5.7)
② 6.1 – 6.4, 6.6, part 10.1 (20)
③ 7.1 – 7.5, 7.7, 7.8 (25)
④ 9.1 – 9.6 (20) (Skip 9.2)
⑤ 9.7 – 9.10 (20)
⑥ 10.2, 10.3 (20)
⑦ Proof of one of the following: (my choice) (5)

a) Maclaurin series for $\sin x$ converges to $\sin x$ for all x.

b) Maclaurin series for $\tan^{-1} x$ by integration of a Known series.

c) harmonic series diverges using $S_{(2^n)}$

d) formula for integration by parts (Know the derivation)

This is a 125 point test and it will count 25% of the grade for the course, unless it is better than your previous average, in which case it counts 50%.