

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%.