PRINT LAST Name: ________________________________________________  HW ID: ______

PRINT FIRST Name: ____________________________________________  UM Student ID: _____________

Signature: _____________________________________________________  Discussion section #: ______

Multiple Choice Total Points: ___ out of 75 Date: _____________________
Free Response Total Points: ___ out of 74

This booklet has 16 pages. Check to see if any are missing. You may not use books or notes or any electronic device other than a scientific calculator. Write your HWID at the top of each page in the box provided.

Instructions for the machine-graded part of the exam:

In the spaces on the bubble sheet, print your name, U of M ID number, Course (1051) and DIS section and then shade in the appropriate bubbles. For example:

You MUST use a soft pencil (No. 1 or No. 2) to answer this part. Do not fold or tear the answer sheet. DO NOT MAKE ANY STRAY MARKS ON THE ANSWER SHEET. When you have decided on a correct answer, circle the answer in this booklet and blacken completely the corresponding bubble on the answer sheet. If you erase something, do so completely. Each question has a correct answer. If you mark two answers, the question will be counted as wrong. There is no penalty for guessing. Each problem is worth 5 points and there is no partial credit.

Note that either you or the School of Mathematics may request a re-grade of the machine graded part of this exam. All re-grades will be based on responses in this exam booklet and not on the machine graded response sheet. Any problem for which the answer is not indicated in this exam booklet, or which has no relevant accompanying calculations will be counted as wrong on the re-grade. Therefore work and answers must be clearly shown in this exam booklet.

Instructions for the hand-graded part of the exam:

SHOW ALL WORK. Unsupported answers will receive no credit. Partial credit is possible.

After you finish both parts of the exam:

Hand in this exam booklet and your GENERAL PURPOSE ANSWER SHEET. Have your ID card in your hand when turning in your exam so the proctor can check it.