

TE 103

INTERMEDIATE TECHNICAL MATHEMATICS



STUDY GUIDE for Challenge Exam

NOTE for the Actual Challenge EXAM:
Formulas for the test are given on the last page of the exam.
There are 100 questions on the Exam.

REVISED
July 2014

DEPARTMENT: Manufacturing

COURSE TITLE: TE 103 Intermediate Technical Mathematics
Four (4) Credits

I. COURSE DESCRIPTION:

A study of numbers, common and decimal fractions, Scientific notation, percentages, ratios, proportions, direct and inverse variation, formulas and their transpositions, linear systems and equations, and quadratic equations

II. STUDENT PERFORMANCE OBJECTIVES:

- 1. Add, subtract, multiply and divide common fractions**
- 2. Change a common fraction to a decimal fraction and round off to a given number of places**
- 3. Add, subtract, multiply and divide decimal fractions**
- 4. Multiply and divide numbers in scientific notation form**
- 5. Add, subtract, multiply and divide signed numbers**
- 6. Simplify or evaluate algebraic expressions**
- 7. Solve ratio problems**
- 8. Solve proportion problems**
- 9. Solve direct and inverse variation problems**
- 10. Solve percentage problems given any two of the three variables of the formula $P = R*B$**
- 11. Add, subtract, multiply and divide numbers with exponents**
- 12. Solve linear equations and word problems**
- 13. Solve simultaneous equation problems using addition, graphing and substitution methods**
- 14. Factor and solve quadratic equations**

III. TESTING CONDITIONS – When you come to take the exam, you should bring:

- 1) Pencils
- 2) Eraser
- 3) Scientific Calculator - Note: A cell phone or computer CANNOT be used as a calculator.

IV. TEST FORMAT and PROCEDURES – to take this test, you must:

- 1) Pay fee to take the test at Cashier's Office. Bring receipt when you come to take the test.
- 2) Go to Academic Testing Center at GRCC and fill out request form. The Testing Center is on the third floor of the Student Center.
- 3) Make an appointment to take the test at the career resource center.
- 4) Take the test.
- 5) The Testing Center will grade the test and give you the results directly or they may call you with results depending on how busy they are there at the time.

**PLEASE NOTE: CREDIT WILL BE POSTED ON A CREDIT/NO CREDIT BASIS.
SOME COLLEGES DO NOT GIVE CREDIT FOR COLLEGE EXAMINATIONS.
BE SURE TO CHECK WITH YOUR TRANSFER COLLEGE.**

**Test will be completed within a three (3) hour period.
See sample problems for specific types of questions.
You must pass with a minimum of 70% for successful completion of this exam.**