**STARZ UNIVERSITY**

Airfield, Sinkor, Monrovia

MATH 108 FINAL EXAM (PRACTICE)

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID#:\_\_\_\_\_ Sec.: \_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

***INSTRUCTION*:** This Exam accounts for ***35%*** of your final score. Solve all problems with clarity-Showing logical progression of steps leading to answers. Any form of malpractice shall be reason enough to have you permanently dropped from the course with strong recommendations to the Dean for further punitive measures against you.

***PART I: BUSINESS MATH***

A DAF Truck is on sale for ***US $ 45,000***. It has the following Hire Purchase Terms: 22% interest; upfront payment of US ***$ 12,000;*** Balance dueequal monthly installments of US ***$ 5,000*** (per month), beginning December, 2019.

1. How much does a hire purchaser pay in all?

2. When will a hire purchaser complete payment?

**PART II: Combination**

From a group of 7 men and 5 women, four persons are to be selected to form a committee so that at least 3 men are there in the committee. In how many ways can it be done?

***PART III: LAWS OF PROBALITY***

A box contains 18 brown balls and 22 grey balls. Two balls are picked at random, one at a time without replacement.

1. What is the probability that they are of the same color?
2. When is the probability that they are of different colors?

***(Write answers as fractions in the lowest terms)***.

***PART IV:*** PERMUTATIONS OF WORDS:

How many arrangements can be made out of the letters of the word

(a) ENGINEERING ? (b) MAXIMUM (c) OPTIMIZATION (d) STATISTICAL (e)MATHEMATICS.