

Dr. Raja Latif. Math131-05-101 First Quiz Test

Department of Mathematics and Statistics, King Fahd University of Petroleum and Minerals  
Marks: 20, Time: 20 Minutes, Ch. 1.1,1.3 & Ch. 3.1-3.2 Wednesday, October 20, 2010.

NAME: \_\_\_\_\_, I.D# \_\_\_\_\_ Sec# 05

**NOTE – Show complete work for full credit. The questions are not in any order of difficulty at all.**

I. EXAM QUESTION52TB25(MARKS:10)(BUSINESS)

Suppose that consumers will purchase  $q$  units of a product when the price  $p$  is equal to  $\frac{80-q}{4}$  dollars each unit. How many units  $q$  of the same product must be sold in order that sales revenue is equal to \$ 400. [Revenue :  $R = qp$ ]

II. QUESTION.138TB26(MARKS:10) (APPRECIATION)

It is predicted that the sale price  $p$  of a house will be doubled (two times) in twenty years.

At present this year in 2010 if the sale price  $p$  of a house is equal to \$ 150000. Find a linear equation that describes the house's value after  $x$  years from now.

Use the linear equation to predict the sale price  $p$  of this house presently with sale price of \$ 150000 after 16 years from now in the year of 2026.

Linear Equation:  $p = Ax + B$

Where A = \_\_\_\_\_, B = \_\_\_\_\_.

Sale Price in 2026: \_\_\_\_\_ \$

The Number of Units Sold:  $q =$  \_\_\_\_\_

P = \_\_\_\_\_