College Name: _____

Student Name: _____ Seat No: _____

Copy No: _____

KARACHI UNIVERSITY BUSINESS SCHOOL
UNIVERSITY OF KARACHI
FINAL EXAMINATION JUNE 2016; AFFILIATED COLLEGES
BASIC MATHEMATICS BA (H) – 321
BBA – I

Date: June 13, 2016 **Max Time: 1.5 Hrs**
Max Marks: 50

INSTRUCTIONS:

1. **Attempt any 5 questions. Do not write anything on the question paper.**
2. **Mobile phones or any other communicating device will not be allowed in the examination room. Students will have to remove the batteries of these devices before entering the examination hall.**

Q1. a) Find the distance between the lines $9x+3y-21=0$ and $9x+3y-30=0$

b) Form the equation of a line which passes through the points $A(2,3)$ and $B(-1,4)$

Q2. Determine the relations between the line $2x+y-4=0$ and the line $2x+6y-4=0$, either they are coincident, perpendicular, parallel or intersecting lines.

Q3. Determine the demand equation of a particular share in stock market, if 100 shares are sold when the price is 80 rupees, furthermore, 200 shares are sold when the price becomes 60 rupees.

Q4. Suppose the fixed cost of production for a commodity is Rs.55, 000 and the variable cost is 35% of the selling price of 15 rupees per unit. What is the break-even quantity of the production?

Q5. A manufacturer produces their production by two units, Unit 'A' makes 150 LED TV set and 800 Smart TV set in a month. Another unit 'B' makes 440 LED TV and 860 Smart TV in a month. Represent the information into matrix form, also find the production of each unit in the duration of one financial year.

Q6. a) If Rs.210, 000 invested @ 12% interest rate, how much should be accumulated at the end of 5^{th} year?

b) A businessman deposited Rs.120,000 in a credit account which pay interest @ 6% per year compounding semi-annually, calculate the total amount.

Q7. A young man has received an inheritance of Rs.90,000. He invested a portion of his inheritance for later years. His goal is to accumulate Rs.1,30,000 in 5 years. How much inheritance should be invested of money will earn 12% per year compounded annually.

Q8. Define Effective rate of interest? If an investment was made with a nominal interest rate of 14% per year compounded quarterly, determine its effective rate of interest.

Q9. Find the derivative of $f(x)=x^3$ by using first principle method.

END OF SUBJECTIVE PAPER