

College Name: _____

Student Name: _____ Seat No: _____

Copy No: _____

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

Date: December 26, 2016

Max Time: 2 Hrs
Max Marks: 50

INSTRUCTIONS:

- 1. Attempt any 5 questions. Do not write anything on the question paper**
- 2. Mobile phone(s) 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 business earn a profit of Rs.37,000 which has to divide among three friends such that ratio of second friend is $\frac{1}{4}$ of the third friend and the ratio between the first and the third friend is 3 : 5. How much each friends get from the profit amount.

Q2 An auditorium has 20 seats on the first row, 24 seats on the second row, 28 seats on the third row, and so on and has 30 rows of seats. How many seats are in the theatre?

Q3 A factory is manufacturing an electronic item with fix cost of Rs.600,000 and variable cost Rs.150 per unit. If the selling price is Rs.240 per unit.
(a) Determine the Break-Even Quantity
(b) Number of units sold to earn Profit of Rs.90,000.

Q4 The average Cost function of a firm is given as:

$$C = 25000 - 180Q + 0.50Q^2$$

The operational manager is interested to find what level of output (Q) may be produce so that the firm will minimize its average cost.

Q5 Al-Karam and Gul-Ahmed are well known business competitors, if these two competitors are represented in terms of the equations:

$$x^2 + y^2 = 29$$

$$y - x = 3$$

Determine the point at which the two competitors may compete each other's.

Q6 Ahmed wish to deposit Rs.7000 each month in an investment account which earn interest @ 9% annual interest rate. Calculate the future value of an annuity for 5 years if the interest is computed on monthly basis.

Q7 A firm produces three products A, B and C. requiring the mix of three materials P, Q, and R. The requirement (per unit) of each product for each materials is as follows:

$$M = \begin{matrix} & P & Q & R \\ \begin{matrix} A \\ B \\ C \end{matrix} & \begin{pmatrix} 2 & 3 & 1 \\ 4 & 2 & 5 \\ 2 & 4 & 2 \end{pmatrix} \end{matrix}$$

Using matrix notation find the total requirement of each material if the firm produce 100 quantity of each product A, B and C.

END OF SUBJECTIVE PAPER