College Name: _____

Seat No: _____ Student's Name: _____

Copy No: _____

KARACHI UNIVERSITY BUSINESS SCHOOL
UNIVERSITY OF KARACHI
FINAL EXAMINATION, DECEMBER 2016; AFFILIATED COLLEGES
STATISTICS; BA(BS)–532
BBA – VI

Date: January 3, 2017   **Max Time: 2 Hrs**
                                                              Max Marks: 30

<u>**INSTRUCTIONS:**</u>
   1. **Attempt all questions. Do not write anything on the question paper.**
   2. <u>**TABLES ARE NOT REQUIRED.**</u>
   3. **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   Describe under what condition
      a) Log normal distribution is used
      b) Mutually exclusive events are not independent
      c) Covariance , and Correlation are same
      d) Component bar diagram is used Instead of multiple bar diagram

Q2 a) Probability that 30% of the people prefers online shopping. What is the probability that out of 8 persons selected at random at a park?
      i.   Exactly 3 prefer online shopping
      ii. At-least 6 prefer online shopping
      iii. Less than mean number of people prefer online shopping

Q2 b) Unemployment rate of male and female are given below

Male	Y	2.9	6.7	4.9	7.9	9.8	6.9	6.01	6.2	6	5.1	4.7	4.4	5.8
Female	X	4	7.4	5	7.2	7.9	6.1	6	5.8	5.2	4.2	4	4.4	5.2

Summary

ΣY	ΣX	ΣY^2	ΣX^2	ΣXY
77.31	72.4	495.03	423.94	455.03

Calculate   i) Regression line y on x
              ii) Coefficient of correlation
              iii) Interpret the values a, b & r
              iv) Test the significance of 'r' at 5% level of significance
                                                          [Table value = 2.20]

Q3   The age, x years of each women is a MBA class in the year 2016 was recorded. In random sample of 250 women it was found that $\Sigma x = 43205$ & $\Sigma x^2 = 7469107$. Calculate
      i.   An unbiased estimate of μ and σ^2
      ii. Construct 95% confidence interval for μ
      iii. By using Confidence interval would you accept the hypothesis that $\mu = 29$ years.
      iv. Carry out a significance test at 5% level of significance that $\mu = 31$ against the alternative $\mu \neq 31$

                                                          [Table value = 1.96]

END OF SUBJECTIVE PAPER