College Name: _____

Student Name: _____   Father's Name: _____

Copy No: _____

KARACHI UNIVERSITY BUSINESS SCHOOL
UNIVERSITY OF KARACHI
FINAL EXAMINATION AFFILIATED COLLEGES; JUNE 2016
STATISTICAL INFERENCE; BA (H)–432 (PART B)
BBA – IV

Date: June 11, 2016   **Max Time: 90 Mins**
                                                             Max Marks: 30

INSTRUCTIONS:
1.   **Attempt all questions. Do not write anything on the question paper. TABLES ARE NOT REQUIRED.**
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)   Draw all samples of size three without replacement from the population 2, 3, 4, 4, 5, 6
   b)   In a random sample of 400 industrial accidents it was found that 231 were due at least partially to unsafe working conditions.
   i)   Construct a 99% confidence interval for true proportions   **[Table value, ±2.57]**
   ii) By using the result of part (i), Can we say that 50% of the accidents are due to unsafe working condition? Justify your answer. (Calculation not required)

Q2 a)   The following data represents the test score obtained by two group of people
        Group I   n= 12   mean=76   Standard deviation = 2.8
        Group II   n= 10   mean=81   Standard deviation = 3.2
        Construct 95 % Confidence interval for difference of means **[Table value (1.725)]**
        By using the result of part (i), Comment on the significance at 5%
   b)   Discuss the techniques of reducing Type I error and Type II error.

Q3 a)   Following are the measurements of the air velocity and evaporation rate of burning fuel droplets is an impulse engine.

Air velocity cm/s X	20	60	100	140	180	220	260	300	340	380
Evaporation rate mm^2/s Y	0.18	0.37	0.35	0.78	0.56	0.75	1.18	1.36	1.17	1.65

   N=10 ΣX=2000 ΣY=8.38 ΣXY=2175.40 ΣY^2=91097 Σ=X^2=532000
   By using the results. Calculate the Regression line Y on X.
   Interpret the value of a and b
   b)   A coin is tossed 200 times; the result is 110 heads and 90 tails. Test the hypothesis that the coin is balanced.at 5% level of Significance.   **[Chi square Table Value=3.481]**

END OF SUBJECTIVE PAPER