

College Name: _____

Student Name: _____ Seat No: _____

Copy No: _____

KARACHI UNIVERSITY BUSINESS SCHOOL
UNIVERSITY OF KARACHI
FINAL EXAMINATION, DECEMBER 2016; AFFILIATED COLLEGES
BUSINESS STATISTICS; BA (H)–451
BBA – III

Date: December 26, 2016

Max Time: 1 Hr
Max Marks: 30

INSTRUCTIONS:

1. Attempt any 3 questions. Do not write anything on the question paper
2. **TABLES ARE NOT REQUIRED.**
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 Give reason why

- a) Arithmetic mean is taken as ideal average
- b) Fisher index is called as Fisher's ideal index
- c) Mutually exclusive events have $P(A \cap B) = 0$
- d) Grouping error increases when class interval decreases
- e) Binomial Probability Distribution is positively skewed when $p < 1/2$

Q2 a) Following are the growth rates of the last 12 month of a company. Calculate AM, GM and HM, and comment which average is most appropriate.

1.12, 1.05, 1.16, 1.20, 0.99, 0.97, 1.50, 1.13, 1.14, 1.08, 1.09, 1.33

b) By calculating the mean and variance of the following stock index find consistency of the stock market.

| | | | | | | |
|------------------|------|------|------|------|------|------|
| Index | 2100 | 2200 | 2300 | 2400 | 2500 | 2600 |
| frequency | 4 | 2 | 4 | 6 | 5 | 3 |

Q3 a) If $P(A) = 0.2$ $P(A \cup B) = 0.8$ $P(B') = 0.3$ Calculate the following
i. $P(B)$ ii) $P(A/B)$ iii) $P(A' \cap B)$ iv) $P(A \cap B')$ v) $P(A' \cap B')$

b) Find the number of ways in which 7 people be lined up to get on a bus if two people insist to follow each other.

Q4 a) Following data represents the weight of five people before and after using a weight reducing diet plan.

| | | | | | | |
|--------|---|----|----|-----|----|----|
| Before | X | 80 | 90 | 100 | 95 | 88 |
| After | Y | 75 | 91 | 94 | 93 | 86 |

Calculate regression line y on x

- i. Estimate the weight of a person after using diet plan whose weight before 92kg.
 - ii. How can we justify that diet plan is effective?
- b) The probability that remote control car is defective is 0.2, from set of 8 cars calculate the probability that
- i. Exactly 3 are defective
 - ii. More than average are defective
- A box contain 8 cars, calculate out of 100 such boxes how many boxes would you expect that contain exactly 3 defective cars.

END OF SUBJECTIVE PAPER