$\qquad$
Student Name: $\qquad$ Seat No: $\qquad$

Copy No: $\qquad$

# KARACHI UNIVERSITY BUSINESS SCHOOL UNIVERSITY OF KARACHI FINAL EXAMINATION JUNE 2017; AFFILIATED COLLEGES BUSINESS STATISTICS; BA (H) - 451; (PART B) BBA - III 

Date: June 13, 2017
Max. Time: 1.5 Hrs
Max. Marks: $\mathbf{3 0}$

## INSTRUCTIONS:

1. Attempt all questions all carry equal marks. TABLES ARE NOT REQUIRED.
2. Do not write anything on the question paper, EXCEPT initials mentioned above.
3. 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) Describe the method of conversion of Frequency Distribution into Probability Distribution.
b) After extensive training of scouts and guides, test scores of two groups is as follows:

| Scouts | 52 | 63 | 21 | 30 | 47 | 70 | 58 | 74 | 28 | 32 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Guides | 44 | 58 | 38 | 73 | 62 | 81 | 77 | 54 | 45 | 43 |

Calculate coefficient of variation and suggest which group is more consistent
Q2 a) The probability that $30 \%$ of the people invest their saving in Federal Reserve. Out of 8 randomly selected persons what is the probability that
i. At-least 6 invest their saving in Federal Reserve
ii. Less than mean number of people invest their saving in Federal Reserve
b) Smoking and Lung Disease According to the Arizona Chapter of the American Lung Association, 7.0\% of the population has lung disease. Of those having lung disease, 90.0\% are smokers; of those not having lung disease, $25.3 \%$ are smokers. By using Tree Diagram determine the probability that a randomly selected person is a smoker.

Q3 a) Describe three properties of normal distribution
b) The following data shows the average share rate and mortgage rate for 10 years.

| Years | I | II | III | IV | V | VI | VII | VIII | IX | X |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Share \% | 7.8 | 6 | 8 | 10.5 | 10.5 | 9.8 | 6.2 | 7.2 | 6.8 | 8.2 |
| Mortgage \% | 12.2 | 9.5 | 11.8 | 11.8 | 15 | 15 | 10 | 11.2 | 11.5 | 14 |

The following totals were obtained

| $\Sigma X$ | $\Sigma Y$ | $\Sigma X Y$ | $\Sigma X^{2}$ | $\Sigma Y^{2}$ |
| :---: | :---: | :---: | :---: | :---: |
| 81 | 122 | 1010.6 | 681.14 | 1521.26 |

i. Calculate regression and correlation coefficient.
ii. Under what condition regression and correlation coefficient are same.

