

Roll No.

BBA-206(N)

B. B. A. (Second Semester)

EXAMINATION, 2016

(New Course)

Paper Sixth

BUSINESS STATISTICS

Time : Three Hours] [Maximum Marks : 70

Note : Attempt *ten* questions from Section A and any *two* questions from Section B and any *two* questions from Section C.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A 3 each

(Short Answer Type Questions)

Note : Attempt all the *ten* questions from this Section.

1. (A) Discuss different types of data. Give three main sources for data on Indian Economy.
- (B) What is the difference between bar chart and histogram ?

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- (C) Calculate median and mode of the given data.
Using them find arithmetic mean :

Marks (Less than)	No. of Students
10	8
20	23
30	45
40	65
50	75
60	80

- (D) The following is the runs scored in last six innings by two cricket players :

No. of innings	Player X	Player Y
1	28	68
2	42	10
3	10	8
4	40	46
5	32	21
6	11	57

Find out who is more consistent.

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- (E) What is relevance of correlation in business decision making ? Find out correlation between price and demand of X in the following case through scatter diagram method :

Price of X	Demand of X
2	80
3	70
4	62
5	55
6	50
7	45
8	41
9	38
10	35

- (F) Explain the following regression equation :

$$Y_i = \alpha + \beta X_i + \mu_i$$

- (G) What is Bayes' theorem ?

- (H) A bag contains 5 red, 5 white and 6 green balls. Three balls are drawn at random. What is the probability that a red, a white and green balls are drawn ?

- (I) What do you mean non-sampling errors ?

- (J) Discuss stratified random sampling method.

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Section—B

10 each

(Long Answer Type Questions)

Note : Attempt any *two* questions.

2. Calculate Karl Pearson's coefficient of skewness :

Variable	Frequency
70—80	11
60—70	22
50—60	30
40—50	35
30—40	21
20—30	11
10—20	6
0—10	5

3. Two lines of regression are given by $8X - 10Y + 66 = 0$; and $40X - 18Y = 214$. Find (i) the mean values of X and Y ; (ii) the coefficient of correlation between X and Y .
4. What is the difference between statistics and parameters ? Discuss the significance and limitations of the statistics in detail.
5. Write short notes on the following :
- Properties of a good measures of variation
 - Quartile deviation

Section—C

10 each

(Long Answer Type Questions)

Note : Attempt any *two* questions.

6. If a binomial experiment has seven trials in which the probability of success (P) is 0.5 and the probability of

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failure is (q) 0.5, compute each of the following probabilities :

- P (exactly five successes)
 - P (at least five successes)
 - P (at most five successes)
7. What do you mean by null hypothesis and alternate hypothesis ? How do they relate to type I and type II errors ? Discuss.
8. Discuss any *two* large sample tests in detail with their concept, applicability and limitations.
9. Write short notes on the following :
- Regression lines
 - Addition vs. Multiplication law

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