

Bachelor of Commerce

B.Com

CHOICE BASED CREDIT SYSTEM

**BCOC – 134: BUSINESS MATHEMATICS AND
STATISTICS**

ASSIGNMENT

2019-20

Second Semester



School of Management Studies

Indira Gandhi National Open University

Maidan Garhi, New Delhi -110068

**BACHELOR OF COMMERCE
CHOICE BASED CREDIT SYSTEM
BCOC – 134: BUSINESS MATHEMATICS AND STATISTICS
ASSIGNMENT: 2019-20**

Dear Students,

As explained in the Programme Guide, you have to do one Tutor Marked Assignment in this Course. The assignment has been divided into three sections. Section A Consists of long answer questions for 10 marks each, Section B consists of medium answer questions for 6 marks each and Section C consists of short answer questions for 5 marks each.

Assignment is given 30% weightage in the final assessment. To be eligible to appear in the Term-end examination, it is compulsory for you to submit the assignment as per the schedule. Before attempting the assignments, you should carefully read the instructions given in the Programme Guide.

1. Those students who are appearing in June 2020 Term End Examination they have to submit latest by in 15 March 2020.
2. Those students who are appearing in December 2020 exams. They should download the new assignment and submit the same latest by 15 October 2020.

You have to submit the assignment of all the courses to the Coordinator of your Study Centre.

TUTOR MARKED ASSIGNMENT

COURSE CODE	:	BCOC-134
COURSE TITLE	:	BUSINESS MATHEMATICS AND STATISTICS
ASSIGNMENT CODE	:	BCOC-134/TMA/2019-20
COVERAGE	:	ALL BLOCKS

SECTION – A

(This section contains five questions of 10 marks each)

Q-1 For two firms A and B belonging to same industry, the following details are available : **3+3+4**

	Firm A	Firm B
Number of Employees :	100	200
Average monthly wage :	Rs. 4,800	Rs. 5,100
Standard deviation :	Rs. 600	Rs. 540

Find

- (a) Which firm pays larger amount as wages?
- (b) Which firm shows greater variability in the distribution of wages?
- (c) Find combined average monthly wage and the standard deviation of the wages of all the employees in both the firms.

Q-2 The performance of a student in a business school was evaluated as follows. Calculate weighted mean from the given data and distinguish between weighted arithmetic mean and simple arithmetic mean. **10**

	Marks Obtained	Weights
Class test	38	10
Presentation	36	15
Attendance	15	05
Class participation	20	10
Final examination	55	60

Q-3 Calculate the coefficient of rank correlation from the following data:- **10**

Roll no. of Students :	1	2	3	4	5	6	7	8	9	10	11	12
Marks in X :	60	34	40	50	45	41	22	43	42	66	64	46
Marks in Y :	75	32	34	40	45	33	12	30	36	72	41	57

Q-4 From the following data obtain the two regression equations. **10**

Sales :	91	97	108	121	67	124	51	73	111	57
Purchase :	71	75	69	97	70	91	39	61	80	47

- Q-5** Calculate Fishers Ideal Index from the data given below and show that it satisfies the Time Reversal and Factor Reversal tests. **4+3+3**

Commodity	Base Year		General Year	
	Quantity	Price	Quantity	Price
A	12	10	15	12
B	15	7	20	5
C	24	5	20	9
D	5	16	5	14

Section – B

(This section contains five short questions of 6 marks each)

- Q.1** What is a Matrix? Explain the types of matrices with examples. **6**
- Q.2** What do you understand by a minor and cofactor of a square matrix? Explain with examples. **6**
- Q.3** Explain Input – Output Analysis. What are its assumptions? **6**
- Q.4** Explain the types of Algebraic functions with examples. **6**
- Q.5** What is continuous compounding? Explain with the help of an example. **6**

SECTION – C

(This section contains four short questions of 5 marks each)

- Q.1** Distinguish between the following : **5X2**
(a) Inverse and Composite Function.
(b) Additive and Multiplicative model of time series analysis.
- Q.2** Write short notes on the following : **5X2**
(a) Continuous Discount
(b) Consumer Price Index Number