Bachelor of Commerce

B.Com

CHOICE BASED CREDIT SYSTEM

BCOC – 134: BUSINESS MATHEMATICS AND STATISTICS

ASSIGNMENT

2021-2022

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: 2021-22

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 10 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 2021 Term End Examination they have to submit latest by in 15th March 2021.
2. Those students who are appearing in December 2021 exams. They should download the new assignment and submit the same latest by 15th October 2021.

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

TUTOR MARKED ASSIGNMENT

PROGRAMME CODE	**:**	**B.COM**
COURSE CODE	**:**	**BCOC – 134**
SEMESTER	**:**	**SECOND**
COURSE TITLE	**:**	**BUSINESS MATHEMATICS AND STATISTICS**
ASSIGNMENT CODE	**:**	**BCOC – 134/TMA/2021-22**
COVERAGE	**:**	**ALL BLOCKS**

Maximum Marks: 100

Note: Attempt all the questions.

Section – A

Q.1 The following data relate to the age of a group of Government employees. Calculate the arithmetic mean and standard deviation. **(5X2)**

Age of employees	50-55	45-50	40-45	35-40	30-35	25-30	20-25
Number of employees	25	30	40	45	80	110	170

Q.2 The value of same 15 trainees in two assessment A and B are given below; the two number within the brackets denoting the ranks of the same trainee in A and B respectively : **(10)**

(1,10) (2,7) (3,2) (4,6) (5,4) (6,8) (7,3) (8,1) (9,11) (10,15) (11,9) (12,5) (13,14) (14,12) (15,13)

Use Spearman's formula to find the rank correlation coefficient.

Q.3 Using the data given below calculate price index numbers for the year 2020 by **i)** Laspeyre's formula and **ii)** Paasche's formula with the year 2010 as base. **(5X2)**

Commodity	**Price (Rs.)**		**Quantity (kg)**	
	2010	**2020**	**2010**	**2020**
Sugar	9.3	4.5	100	90
Coffee	6.4	3.7	11	10
Tea	5.1	2.7	5	3

Q.4 What is the present value of Rs. 2,000 due in 2 years at 5% compound interest? When the interest paid (a) yearly and (b) half yearly. **(5X2)**

Q.5 If A= $\begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$, then find the value of $A^2 - 3A + 2I$ **(10)**

Section – B

Q.6 Briefly explain the properties of determinants with examples. **(6)**

Q.7 What is median? Explain its merits and limitations. **(6)**

Q.8 What do you mean by time series? Briefly explain the importance of time series analysis. **(6)**

Q.9 Discuss the limitations of statistics. **(6)**

Q.10 Briefly explain the different types of mathematical functions. **(6)**

Section – C

Q.11 Distinguish between the following : **(5X2)**

a) Correlation and Regression

b) Nominal and effective rate of discount

Q.12 Write short notes on the following : **(5X2)**

a) Partition values

b) Transpose of a matrix