



Plot No. 2, Knowledge Park-III, Greater Noida (U.P.) –201306

POST GRADUATE DIPLOMA IN MANAGEMENT (2020-21) END TERM EXAMINATION (TERM -I)

Subject Name: **Quantitative Techniques for Managers**

Time: **02.30 Hrs.**

Sub. Code: **PG 04**

Max Marks: **60**

Note:

1. All questions are compulsory. Section A carries 10 marks: 5 questions of 2 marks each, Section B carries 30 marks having 3 questions (with internal choice question in each) of 10 marks each and Section C carries 20 marks one Case Study having 2 questions of 10 marks each.

SECTION - A

Attempt all questions. All questions are compulsory.

2× 5 = 10 Marks

Q.1 (A): Define and differentiate between Mean, Mode and Median with example.

Q.1 (B): Which Player is more consistent?

	Player A	Player B
Batting Average	82	89
Variance of scores	25	36

Q.1 (C): Define the concept and applicability of Multiple Regression.

Q.1 (D): Discuss the importance of Inferential Statistics in Business Decision Making.

Q.1 (E): How 3-yearly moving averages method help in the Business forecasting?

SECTION - B

Attempt all questions

3× 10 = 30 Marks

Q.2: A. Explain Lorenz Curve with its interpretation.

OR

B. Differentiate between Probability and Non-Probability Sampling techniques.

Q.3: A. Find the Variance and Standard deviation for the following distribution

Profits (Rs. Crore)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Number of Companies	4	12	24	36	20	18	8	5

OR

B. Explain different measures of central tendency and mention advantages of Arithmetic Mean.

Q.4: A. Explain Qualitative Methods of Forecasting.

OR

B. Predict the estimated Production for the year 2025 based on the data using regression trend analysis.

Year	2014	2015	2016	2017	2018	2019	2020
Production (Tonnes)	170	180	182	173	184	189	182

SECTION - C

Read the case and answer the questions

10×02 = 20 Marks

Q. 5: Case Study:

A Company produced Tea every economic year, the tea production of a company are as follows:

Year	Production ['000 lbs.]	Year	Production ['000 lbs.]
1986	165	1998	280
1987	178	1999	351
1988	236	2000	320
1989	213	2001	370
1990	180	2002	366
1991	163	2003	325
1992	150	2004	256
1993	187	2005	304
1994	210	2006	291
1995	237	2007	271
1996	203	2008	274
1997	215	2009	272

Question:

Q 5 (A): Draw a time series graph on a graph paper relating to the following data and show the trend by free hand curve

Q 5 (B): Comment on the trend by giving emphasis in the component of time series and business cycle and comment on the company's position and elaborate the stage or year of production according to the business cycle.

Mapping of Questions with Course Outcome

Question Number	COs	Marks Allocated
Q. 1:	CO1	10 marks
Q. 2:	CO2	10 marks
Q. 3:	CO3	10 marks
Q. 4:	CO4	10 marks
Q. 5:	CO3, CO4	20 marks