

**SHREE NARAYANA COLLEGE OF COMMERCE  
AHMEDABAD**

Name of the Department: Statistics  
Subject: Quantitative Techniques for Management  
Class & Semester: A,B,D Division (Semester- II)  
Faculty Name: Dr.Neeta M.Mandaliya

**ASSIGNMENT**

**SECTION – 1 (UNIT – 1)**

Enlist: Descriptive Statistics-I

- (i) Explain Meaning of Statistics and its Application of Statistics in Different Fields.
- (ii) Obtain Mean by Direct Method and Short -Cut method for the following Observation: 47,53,52,59,72,83,92,94,98,99.
- (iii) Find Mean, Median and Mode of the following Frequency distribution. Also Find  $Q_1, Q_3, D_7$  and  $P_{30}$

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	1	6	9	21	35	18	5	5

**SECTION – 2 (UNIT – 2)**

Enlist: Descriptive Statistics-II

- (i) Explain Steam and leaf diagram.
- (ii) Write Short note on Box plot Method.
- (iv) Find Range, , Coefficient of range, quartile deviation and coefficient of quatile deviation.

Observation	10	11	12	13	14	15	16	17	18
Frequency	3	10	15	18	22	16	13	9	4

- (v) Find SD and CV from the following distribution.

Daily Wage	60-70	70-80	80-90	90-100	100-110	110-120	120-130
Persons	10	28	30	42	65	180	10

**SECTION – 3 (UNIT – 3)**

Enlist: Sampling Techniques

- (i) What is Probability sampling?
- (ii) Explain Simple random sampling.
- (iii) From a population having units 5,9,11,19 a sample of size 2 is taken without replacement then verify  $E(\bar{y}) = \bar{Y}$

## SECTION – 4 (UNIT – 4)

Enlist: Probability

- (i) Explain the following terms
  - a) Equally Likely Events
  - b) Condition Probability
  - c) Mutually Exclusive
  - d) Random Experiment
  - e) Union of two events
  - f) Independent Events
- (ii) There are three urns containing respectively 5 white and 3 black balls, 3 white and 5 black balls, 2 white and 6 black balls. An urn is selected at random and a ball is drawn from it. Find the probability that is black.
- (iii) If  $P(A) = \frac{3}{4}$ ,  $P(Y) = \frac{1}{3}$  and  $P(A \cup B) = \frac{11}{12}$  then find the values of
  - (i)  $P\left(\frac{Y}{X}\right)$
  - (ii)  $P\left(\frac{Y'}{X}\right)$

## SECTION – 5 (REVISION & PRACTICE)

Question:

From Unit 1 to Unit 4, draft the following:

- (1) What is the mode of the observations 5,8,6,4,10,15,18,10?
  - (a) 10 (b) 15 (c) 18 (d) 0
- (2) From the following which measure is obtained by using histogram?
  - (a) Mode, (b) Quartiles, (c) Deciles, (d) Mean
- (3) Mean = 63.45 and Mean Deviation 1.22 then find coefficient of mean deviation.
  - (a) 0.02 (b) 1.22 (c) 0.5 (d) 0
- (4) What is the probability of an impossible event?
  - (a) 0
  - (b) 1
  - (c) Insufficient
  - (d) None of these
- (5) **Of the following sampling methods, which is a probability method?**
  - (a) Simple random
  - (b) Judgement
  - (c) Quota
  - (d) Convenience
- (6) **Sample is regarded as a subset of?**
  - (a) Population
  - (b) Data
  - (c) Distribution
  - (d) Set
- (7) The change in which of following terms does not affect the standard deviation?

- (a) Origin
  - (b) Scale
  - (c) Origin and scale
  - (d) Neither origin nor scale
- (8) The range of data 21,6,17,18,19,8,4 and 13 is
- (a) 17
  - (b) 15
  - (c) 12
  - (d) 4