SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY
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QUESTION BANK (DESCRIPTIVE)

Subject with Code: BUSINESS STATISTICS FOR MANAGERS (20MB9004)

Course & Branch: MBA I Year I -Sem   **Regulation:** R20

UNIT –I

1. Explain functions and scope of the statistics.   [L2,CO1,10M]

2. Define statistics. Explain the significance of statistics   [L1,CO1,10M]

3. Explain origin and development of statistics   [L2,CO1,10M]

4. Explain the applications of statistics.   [L2,CO1,10M]

5. Define statistics. Explain the various branches related to statistics.   [L2,CO1,10M]

6. How computers can be useful for statistical analysis? Explain with example   [L3,CO1,10M]

7. Explain the nature and characteristics of statistics.   [L2,CO1,10M]

8. Define statistics. Explain objectives and scope of statistics.   [L2,CO1,10M]
9. Explain the relation of statistics with other disciplines.   [L3,CO1,10M]

10. What are the limitations of statistics?   [L1,CO1,10M]

UNIT –II

1. Write about the Introduction of Measures of Central Tendency. [L2,CO2,10M]

2. Explain the terms Arithmetic – Median, Mode – Geometric mean and [L1,CO2,10M]
   Harmonic mean.

3. Explain Measures of Dispersion? Write about range, quartile deviation, [L1,CO2,10M]
   Mean deviation, Standard deviation.

4. What is coefficient of variation? How to calculate coefficient of variation in [L2,CO2,10M]
   different Methods.

5. What are the application of measures of central tendency and dispersion [L3,CO2,10M]
   forBusiness Decision making

6. Calculate Mean, Median and Mode from the following data [L4,CO2,10M]

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No.of students	10	18	27	32	24	09

7. Calculate Mean Deviation from the following data and interpret the result. [L4,CO2,10M]

Marks in Statistics(X)	20	35	15	40	10	35	30	25	45	30
Marks in Accounts(Y)	25	30	20	35	20	25	25	35	35	30

8. Calculate Standard Deviation from the following data. [L4,CO2,10M]

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No.of students	10	18	27	32	24	09

9. Find the Quartile Deviation for the data given below? [L4,CO2,10M]

X	0-10	10-20	20-30	30-40	40-50	50-60	60-70
F	7	8	12	15	6	4	3

10. Explain about Bowleys co-efficient of skewness and Pearsons co-efficient
    of skewness with examples. [L4,CO2,10M]

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UNIT-III

1. Explain the terms below   [L2,CO3,5M]

a) Primary data   b) Secondary data.   [L2,CO3,5M]

2. Give a brief explanation about classification and tabulation of data.   [L3,CO3,10M]

3. How Data can be classified and tabulated?   [L3,CO3,10M]

4. What are the methods and tools that are available for data classification and tabulation? Explain in brief.   [L2,CO3,10M]

5. The following are the figures of sales of two firms A&B for the years 2003 to 2010. Present the data graphically.   [L5,CO3,10M]

Year	Sales Firm A ('ooo units)	Sales Firm B ('ooo units)
2003	200	2000
2004	300	3000
2005	400	4000
2006	500	5000
2007	600	6000
2008	700	7000
2009	800	8000
2010	900	9000

6. Elaborate methods of data collection.   [L2,CO3,10M]

7. Draw less than and more than O gives from the data given below?   [L4,CO3,10M]

Profits(rs lakhs)	No. of companies
10-20	6
20-30	8
30-40	12
40-50	18
50-60	25
60-70	16
70-80	8
80-90	5
90-100	2

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8. How can you represent data by one dimensional, two dimensional and three dimensional

diagrams? [L3,CO3,10M]

9. Explain different types of Graphs in data representation with an example. [L2,CO3,10M]

10. What are the rules of constructing a questionnaire? [L2,CO3,10M]

UNIT-IV

1. Calculate correlation coefficient from the following data and interpret the result.[L4,CO4,10M]

Marks in Statistics(X)	20	35	15	40	10	35	30	25	45	30
Marks in Accounts(Y)	25	30	20	35	20	25	25	35	35	30

2. The following data relate to the prices and supplies of a commodity during a period of nine years.
   What is Correlation coefficient? [L4,CO4,10M]

Price(RS)	40	45	65	75	77	87	69	94	43
Supply(KG)	30	35	25	25	19	27	38	49	12

3. Obtain the regression equations for the following. [L4,CO4,10M]

X	8	10	9	7	8	9	6
Y	2	3	4	2	5	4	6

4. What is the Meaning of regression analysis? Explain its utilities. [L2,CO4,10M]

5. Define correlation. Explain different types of correlation. [L2,CO4,10M]

6. Explain the difference between correlation and regression. [L2,CO4,10M]

7. How do you interpret the regression coefficients? [L3,CO4,10M]

8. Find the regression lines for the following data [L4,CO4,10M]

Income (in '000 Rs)	10	20	25	30	38	40	42	50	56	60
Expenditure (in '000 Rs)	9	18	20	25	32	38	40	48	50	53

9. Calculate Spearman's rank correlation coefficient between marks assigned to 10 students by judges
   X and Y in a certain competitive test as shown below? [L4,CO4,10M]

Marks by X	52	53	42	60	45	41	37	38	25	27
Marks by Y	65	68	43	38	77	48	35	30	25	50

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10 Calculate Spearman's rank correlation coefficient for the following data.　　　[L2,CO1,10M]

Rank byA	2	3	5	4	7	6	8	1
Rank byB	1	8	3	5	4	7	6	2

UNIT-V

1. Define Hypothesis. Explain the process of hypothesis testing.　　　[L2,CO5,10M]

2. A sample of 400 individuals is found to have a mean height of 67.47 inches. Is it reasonable to regard the sample drawn from the large population with mean height 67.39 inches and standard deviation of 1.3 inches. Test at 1% level of significance.　　　[L4,CO5,10M]

3. Carry out ANOVA two-way classification to the following data.

　　　[L4,CO5,10M]

	Blocks			
Treatment 1	13	7	9	3
Treatment 2	6	6	3	1
Treatment 3	11	5	15	5

4. In a large manufacturing factory, a survey was conducted regarding three types of bonus schemes. Total employees were divided into four categories namely laborers, clerks, technicians and executives. The results obtained by way of opinion survey are presented in the form of contingency table as given below. Test the goodness of fit at 5% level of significance.

　　　[L4,CO5,10M]

Employees Category	BONUS SCHEMES		
	Type 1	Type 2	Type 3
Labour	190	243	197
Clerks	82	44	44
Technicians	23	78	34
Executives	5	12	8

5. Two random samples were drawn from two normal populations and their values are

A	66	67	75	76	82	84	88	90	92		
B	64	66	74	78	82	85	87	92	93	95	97

Test whether two populations have the same variance at 5% level of significance?

　　　[L4,CO5,10M]

6. A random sample of size16 has 53 as mean. The standard deviation of the sample is 3. Canthis sample be regarded as taken from the population having 56 as mean?　　　[L4,CO5,10M]

7. The life time of electric bulbs for a random sample of 10 from a large consignment gave the following data;

Item	1	2	3	4	5	6	7	8	9	10
Life in '000 hours	4.2	4.6	3.9	4.1	5.2	3.8	3.9	4.3	4.4	5.6

Can we accept the hypothesis that the average life time of bulbs is 4000 hours? [L5,CO5,10M]

8. Distinguish between parametric tests and non parametric tests.   [L2,CO5,10M]

9. Explain the procedure involved in solving ANOVA problem.   [L2,CO5,10M]

10. In an anti-malarial campaign, quinine was administered to 812 persons out of a totalpopulation of 3248. The number of fever cases is shown below.

Treatment	Fever	No fever	total
Quinine	20	792	812
No quinine	220	2216	2436
total	240	3008	3248

Discuss the usefulness of Quinine in checking malaria.   [L4,CO5,10M]

CASE STUDY:

1. The following data relate to the prices and supplies of a commodity during a period of nine years. What is Correlation coefficient?   10M

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Supply(KG)	30		35	25	25	19	27	38	49	12

2. The life time of electric bulbs for a random sample of 10 from a large consignment gave the following data;

Item	1	2	3	4	5	6	7	8	9	10
Life in '000 hours	4.2	4.6	3.9	4.1	5.2	3.8	3.9	4.3	4.4	5.6

Can we accept the hypothesis that the average life time of bulbs is 4000 hours?

3. Calculate Mean, Median and Mode from the following data   10M

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No.of students	10	18	27	32	24	09

4.Calculate Mean Deviation from the following data and interpret the result.   10M

Marks in Statistics(X) .	20	35	15	40	10	35	30	25	45	30
Marks in Accounts(Y)	25	30	20	35	20	25	25	35	35	30

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(20MB9004)

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