



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY
(AUTONOMOUS) :: PUTTUR**

Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code : BUSINESS STATISTICS AND ANALYTICS FOR DECISION MAKING (18MB9004)

Course & Branch: MBA IYear I-Sem

Regulation: R18

UNIT –I

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| 1. Explain functions and scope of the statistics. | 10M |
| 2. Define statistics. Explain the significance of statistics | 10M |
| 3. Explain origin and development of statistics | 10M |
| 4. Explain the applications of statistics. | 10M |
| 5. Define statistics. Explain the various branches related to statistics. | 10M |
| 6. How computers can be useful for statistical analysis? Explain with example | 10M |
| 7. Explain the nature and characteristics of statistics. | 10M |
| 8. Define statistics. Explain objectives and scope of statistics. | 10M |
| 9. Explain the relation of statistics with other disciplines. | 10M |
| 10. What are the limitations of statistics? | 10M |

UNIT –II

1. Write about the Introduction of Measures of Central Tendency. 10M
2. Explain the terms Arithmetic – Median, Mode – Geometric mean and Harmonic mean. 10M
3. Explain Measures of Dispersion? Write about range, quartile deviation, Mean deviation, Standard deviation. 10M
4. What is coefficient of variation? How this can be calculated in different Methods. 10M
5. Application of measures of central tendency and dispersion for Business Decision making 10M
6. 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

7. Calculate Mean Diviation coefficient 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

8. Calculate Standard Diviation 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

9. Find the Quartile Deviation for the given below Problem 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. 10M

UNIT-III

1. Give the list of methods of data collection. 10M
2. Give a brief explanation about classification and tabulation of data 10M
3. How Data can be classified and tabulated? 10M
4. What are the methods and tools that are available for data classification and tabulation? 10M
5. The following are the figures of sales of two firms A&B for the years 2003 to 2010. 10M
present the data graphically?

Year	Sales Firm A (‘000 units)	Sales Firm B (‘000 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? 10M
7. Draw less than and more than Ogives from the data given below? 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

8. How can you represent data by one dimensional, two dimensional and three dimensional diagrams? 10M
9. Explain different types of Graphs in data representation with the instance. 10M
10. What are the representative tools used for Univariate, Bivariate and Multivariate data. 10M

UNIT-IV

1. Calculate correlation coefficient 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

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

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

3. 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 10M

4. Carry out ANOVA two-way classification to the following data. 10M

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

5. 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. 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

6. To determine whether there is really a relationship between employee’s performance in the company’s training program and his success in the job, a sample of 400 cases were taken and the following results were obtained. Test at 1% l.o.s whether the performance in the training program and success in the job are independent and the table is as given below. (Chi Square test for Independency of attributes). (L₅) 10M

	Performance in training program		
	Below Avg.	Avg.	Above Avg.
Poor	23	60	29
Avg	28	79	60
Very good	9	49	63

7. Suppose the National Transportation Safety Board (NTSB) wants to examine the safety of compact cars, midsize cars, and full-size cars. It collects a sample of three for each of the treatments (cars types). Using the hypothetical data provided below, test whether the mean pressure applied to the driver’s head during a crash test is equal for each types of car. Use $\alpha = 5\%$. 10M

Compact cars	Midsize cars	Full-size cars
6	4	2
5	2	5
3	6	6
6	8	6

8. Ten individuals are chosen from a normal population and their heights (in inches) are given below. Test whether the sample comes from a normal population whose mean height is 66 inches or not at 5% level of significance? Use Single sample t-test (L₅) 10M
 63,63,66,67,68,69,70,70,71,71.

9. Calculate correlation coefficient 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

10. Calculate correlation coefficient for the below problem 10M

X	1	2	3	4	5	6	7	8	9	10
Y	25	23	20	16	12	12	10	8	5	4

UNIT-V

1. Obtain the regression equations for the following. 10M

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

2. What is the Meaning of regression analysis? Explain its utilities. 10M
3. Explain the difference between correlation and regression 10M
4. How do you interpret the regression coefficients? 10M
5. Find the regression lines for the following data 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

6. What are the models of time series? Explain with examples 10M
7. Fit a trend line through free hand curve for the below data 10M

Year	1992	93	94	95	96	97	98	99	00	01
Expenditure (in '000 Rs)	10	8	5	15	16	44	49	51	55	62

8. What is Index number? Explain the Characteristics and uses of index numbers 10M
9. Explain about types of index numbers, i.e. Un-weighted price indexes weighted price indexes. 10M
10. What is Time series Analysis? Write about its components. 10M

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