R18

Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
MBA I Year I Semester Supplementary Examinations Nov/Dec 2019
BUSINESS STATISTICS AND ANALYTICS FOR DECISION MAKING

Time: **3 hours**   Max. Marks: **60**

SECTION – A
(Answer all Five Units **5 x 10 = 50** Marks)

UNIT-I

1 Define Statistics and discuss its origin, growth, scope and functions.   **10M**

OR

2 Explain the utility of statistics as a managerial tool. Also discuss its limitations.   **10M**

UNIT-II

3 **a** What are the requisites of a good average?   **5M**

b Calculate median from the following data.   **5M**

Marks	0-10	10-30	30-60	60-80	80-90
No. of Students	5	15	30	8	2

OR

4 **a** Explain mathematical properties of Standard Deviation.   **5M**

b Calculate Pearson's coefficient of skewness.   **5M**

X	12.5	17.5	22.5	27.5	32.5	37.5	42.5	47.5
f	28	42	54	108	129	61	45	11

UNIT-III

5 **a** What do you mean by classification and tabulation? Explain the importance of classification and tabulation.   **5M**

b Discuss the objectives of tabulation.   **5M**

OR

6 Draw less than and more than Ogives from the data given below: **10M**

Marks	10-20	20-30	30-40	40-50	50-60	60-70
No. of Students	4	6	10	20	18	2

UNIT-IV

7 **a** Explain the properties of t-distribution.   **5M**

b From the data given below about the treatment of 250 patients suffering from a disease, state whether the new treatment is superior to the conventional treatment: **5M**

Treatment	No. of Patients		Total
	Favorable	Not Favorable	
New	140	30	170
Conventional	60	20	80
Total	200	50	250

For degrees of freedom = 1, chi-square at 5% level of significance = 3.84.

OR

8 **a** Define correlation. Explain the types of correlation.   **5M**

b Calculate Karl Pearson's coefficient of correlation from the following data and interpret its value.   **5M**

X:	48	35	17	23	47
Y:	45	20	40	25	45

UNIT-V

9	a	Define regression analysis. Explain the properties of regression coefficients.	5M
	b	From the following data obtain the two regression equations.	5M

X:	6	2	10	4	8
Y:	9	11	5	8	7

OR

10 Calculate Fisher's Ideal Index from the given data and show how it satisfies the time reversal and factor reversal tests. **10M**

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	12	20	14	30
B	14	13	20	15
C	10	12	15	20
D	6	8	4	10
E	8	5	6	5

SECTION – B
(Compulsory Question)

1 x 10 = 10 Marks

11. The following table gives the number of refrigerators sold by salesmen in three months, May, June and July.

Month	Salesmen			
	A	B	C	D
May	50	40	48	39
June	46	48	50	45
July	30	44	50	39

a. Is there a significant difference in the sales made by the four salesmen?

b. Is there a significant difference in the sales made during different months?

(for $v_1 = 3$, $v_2 = 6$, $F_{0.05} = 4.76$ & for $v_1 = 2$, $v_2 = 6$, $F_{0.05} = 5.14$)

*** END ***