

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

**MBA I Year I Semester Supplementary Examinations June/July-2025**  
**BUSINESS STATISTICS FOR MANAGERS**

**Time: 3 Hours****Max. Marks: 60****SECTION – A**

(Answer all Five Units 5 x 10 = 50 Marks)

**UNIT-I**

- 1 a Define Statistics. List out the characteristics of statistics. **CO1 L1 5M**  
b Write a note on Functions of Statistics. **CO1 L2 5M**

**OR**

- 2 Write a note on Application of Statistics in various fields. **CO1 L2 10M**

**UNIT-II**

- 3 a Explain Mean, Median and Mode. **CO2 L2 5M**  
b The mean age of a group of 100 children was 9.35 years. The mean age of 25 of them was 8.75 years and that of 65 was 10.51 years. What was the mean age of the remaining children? **CO2 L2 5M**

**OR**

- 4 a Compute the range and the Coefficient of range of the series, and state which one is more dispersed and which one is more uniform. **CO2 L2 5M**  
b From the following marks of 100 students compute the Mean Deviation and its coefficient. **CO2 L2 5M**

Marks	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65
No.of the Students	6	12	17	28	12	10	8	5	2

**UNIT-III**

- 5 a Discuss various data collection methods. **CO3 L2 5M**  
b Express the following data using Pie- Chart: **CO3 L6 5M**

Items	Expenditure as % Total
Food	40
Clothing	15
Housing	10
Fuel	15
Education	10
Entertainment	5
Miscellaneous	5

**OR**

- 6 a Explain Diagrammatic and graphical representation of data. **CO3 L2 5M**  
b Draw a pie chart to represent the following data of the proposed expenditure by the Government for 2024-25. **CO3 L1 5M**

Items	Agriculture	Industry	Irrigation	Education	Miscellaneous
Expenditure (Rs. In Lakhs)	600	400	450	300	250

**UNIT-IV**

- 7 a Define Correlation. List out Properties of Correlation Coefficient. **CO4 L1 5M**
- b Coefficient of correlation between two variants X and Y is 0.8. The variance of X is 16. **CO4 L2 5M**  
 Their Co variance is 20. Find the standard deviation of Y series.

**OR**

- 8 a Explain Regression equation of X on Y and Y on X. **CO4 L2 5M**
- b Determine the Regression equation of X on Y and Y on X for the following data: **CO4 L5 5M**

X	12	14	16	20	32
Y	34	36	38	40	42

**UNIT-V**

- 9 a Explain the process of hypothesis testing. **CO5 L2 5M**
- b Two random samples were drawn from the two normal populations and their values are: **CO5 L2 5M**

A: 16, 17, 25, 26, 32, 34, 38, 40, 42

B: 14, 16, 24, 28, 32, 35, 37, 42, 43, 45, 47

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

**OR**

- 10 a Define Chi - Square test? Discuss the applications of Chi-Square test. **CO5 L2 5M**
- b Using Chi – square ( $\chi^2$ ) test analyse the following data to determine whether the preference pattern of consumers for cellphones is dependent on the income levels. **CO5 L5 5M**

	Level of Income			
Cell Phones	Low	Medium	High	Total
Sony	65	90	100	255
Nokia	35	40	80	155
Realme	50	60	220	330
Total	150	190	400	740

**SECTION – B**

(Compulsory Question)

11

**1 x 10 = 10 Marks**

A test was given to 5 students chosen at random from the MBA class of each of the three universities in Andhra Pradesh. Their scores were found to be as follows:

University	Scores				
A	90	70	60	50	80
B	70	40	50	40	50
C	60	50	60	70	60

Carry out Analysis of Variance and show if there is any significant difference between the scores of students in the three universities (Given  $F_{5\%} = 3.44$ ).

**\*\*\* END \*\*\***