

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

MBA I Year I Semester Regular Examinations December-2025

STATISTICS FOR MANAGERS

Time: 3 Hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a What do you mean by Statistics? Explain Scope of statistics. CO1 L1 6M
b If the Median of the given data is 35, Find the missing frequency; CO1 L2 6M

X	0-10	10-20	20-30	30-40	40-50	50-60	60-70
F	10	20	35	45	?	25	15

OR

- 2 a Discuss the application of dispersion measures for business decision making. CO1 L2 6M
b Find the Range and coefficient of Range from the following data: CO1 L3 6M
20,26,22,28,24,30,34,32

UNIT-II

- 3 a What do you understand by Correlation? List and explain the different types of correlation. CO2 L1 6M
b Calculate the coefficient of correlation from the following data and its probable error. CO2 L3 6M

Marks in MOB	30	55	30	45	52	24	18	12	42	46
Marks in ME	46	46	12	48	30	36	24	36	30	12

OR

- 4 a What do you understand by regression? Explain different types of regression. CO2 L1 6M
b Estimate the lines of regression from the following data: CO2 L2 6M

X	6	12	10	4	8
Y	9	11	15	8	7

UNIT-III

- 5 a What is probability? Explain the rules regarding probability with illustrations. CO3 L1 6M
b Consider a pack containing 5 blue, 4 red and 6 black pens. If a pen is drawn at random from the pack, replaced and the process repeated 2 more times, What is the probability of drawing 3 blue pens and 2 black pen? CO3 L1 6M

OR

- 6 a Brief note on Properties and Assumptions of Poisson Distribution. CO3 L2 6M
b For a particular brand of computers, if it has hard disk problems 80% of the times the startup is slow. As per manufacturer's description, within warranty period, the probability of a slow startup is 2% whereas the probability of hard disk problem is 0.5%. If the computer is starting slow in the warranty period, what is the probability that the hard disk has developed problems? CO3 L1 6M

UNIT-IV

- 7 a What do you understand by hypothesis? What are the Steps involved in hypothesis testing procedure – Explain. CO4 L1 6M
b Examine whether the training program has improve the efficiency of employees at 5% confidence level. The scores obtained by employees are given below. CO4 L3 6M

S.No	1	2	3	4	5	6	7	8	9	10
Before Training	30	32	36	34	32	33	29	33	30	32
After Training	35	34	31	33	33	37	37	40	40	40

OR

- 8 a Explain various steps involved in carrying out ONE WAY – ANOVA. CO4 L2 6M
b Difference between T – Test and Z – Test. CO4 L4 6M

UNIT-V

- 9 a What is Chi – Square Test? Discuss the applications of Chi-square test in detail. CO5 L1 6M
b Using Chi – square (χ^2) test analyze the following data to determine whether the preference pattern of consumers for cell phones is dependent on the income levels. CO5 L3 6M

	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

OR

- 10 a Distinguish between Parametric and Non-Parametric Tests. CO5 L4 6M
b Use the sign test to see if there is any difference between the number of days until collection of an account receivable before and after a new collection policy. Use the 0.05 significance level. CO5 L2 6M

Before	30	28	34	35	40	42	33	38	34	45	28	27
After	32	29	33	32	37	43	40	41	37	44	27	33

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