O.P.Code: 25CS5808	R25	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
M.Tech I Year I Semester Regular Examinations January-2026
COMPUTING FOR DATA ANALYTICS
(Computer Scienec & Engineering)

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

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

UNIT-I

1	a	Define Big Data and explain how business analytics uses it for decisionmaking.	CO1	L1	6M
	b	What are the major challenges associated with Big Data Explain.	CO1	L2	6M
		OR			
2		Describe the process of data preparation and feature engineering in analytics and justify with Case study.	CO2	L2	12M

UNIT-II

3	a	Explain the computation and uses of Arithmetic Mean and Geometric Mean.	CO2	L4	6M
	b	Explain Quartiles, and Percentiles and discuss their importance in statistical analysis.	CO2	L1	6M
		OR			
4		Describe the calculation and significance of Mode and Median for grouped and ungrouped data with an example.	CO1	L3	12M

UNIT-III

5		Explain the key characteristics of a Bernoulli trial and how they relate to the foundation of the Binomial distribution, Give one case Study.	CO3	L4	12M
		OR			
6	a	Express how Cumulative Distribution Function (CDF) and the Probability Density Function (PDF) are useful.	CO6	L5	6M
	b	Define a random variable and distinguish between a discrete and a continuous random variable with examples.	CO5	L6	6M

UNIT-IV

7	a	Differentiate between correlation and causation.	CO2	L6	6M
	b	Analyze the power of one-tailed versus two-tailed tests.	CO4	L4	6M
		OR			
8		Evaluate the importance of sampling distribution in hypothesis testing with an example?	CO4	L4	12M

UNIT-V

9		Differentiate between experimental error and treatment effect in ANOVA.	CO5	L5	12M
		OR			
10		Compare the suitability of SMA versus SES for a trend-stationary time series.	CO2	L2	12M

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