QP CODE: D3BCA2404	**(Pages: 2)**	**Reg. No**	**: .....**
		Name	**: .....**

THIRD SEMESTER FYUGP EXAMINATION, NOVEMBER 2025

Discipline Specific Core (DSC) Courses - Major

BCA3CJ203 : INTRODUCTION TO DATA SCIENCE

(Credits: 4)

Time: 2 Hours **Maximum Marks: 70**

Section A

Answer the following questions. Each carries 3 marks (Ceiling: 24 marks)

1.	How did the Internet and connectivity shape Data Science evolution in 2000s?	BL4	CO2, CO3
2.	Discuss why domain knowledge is critical in Data Science and give one example from a real-world application.	BL4	CO1, CO2, CO5
3.	List common problems handled in data cleaning.	BL1	CO2, CO4, CO5, CO6
4.	Define data collection in Data Science.	BL1	CO1, CO2, CO4
5.	Comment on model evaluation techniques.	BL1	CO1, CO2, CO4, CO6
6.	What is meant by population mean and sample mean?	BL1	CO2, CO4
7.	Draw a Box plot and mark the five number summary.	BL3	CO2, CO4, CO5
8.	What is a Pivot Table?	BL1	CO2, CO4
9.	Explain types of regression with example.	BL2	CO1, CO2, CO4, CO5, CO6
10.	What is underfitting?	BL1	CO1, CO2, CO4, CO5, CO6

(PTO)

Section B			
Answer the following questions. Each carries 6 marks (Ceiling: 36 Marks)			
11.	Compare and contrast the roles of Data Scientist, Data Analyst, and Data Engineer.	BL4	CO1, CO2, CO4, CO5
12.	Differentiate between inconsistent data and duplicate data.	BL4	CO1, CO2, CO4, CO5, CO6
13.	Describe Arithmetic, Geometric, and Harmonic Means. Explain their relationships with an example.	BL2	CO2, CO4, CO5, CO6
14.	Explain key components of Machine Learning.	BL2	CO1, CO2, CO4, CO6
15.	Discuss the applications of Data Science in healthcare and gaming sector.	BL3	CO1, CO2, CO4, CO5
16.	Discuss the major issues and challenges in data integration with examples.	BL4	CO1, CO2, CO4, CO5, CO6
17.	Explain Pearson's first and second coefficients of skewness.	BL2	CO2, CO4, CO5, CO6
18.	Explain Supervised learning in detail.	BL2	CO1, CO2, CO4, CO6
Section C			
Answer any one question. Each carries 10 marks (1 x 10 = 10 Marks)			
19.	Explain the different types of data sampling techniques with examples.	BL2	CO1, CO2, CO4, CO5, CO6
20.	Define Scatter diagram. Explain different correlations by drawing scatter plot.	BL3	CO2, CO4, CO5, CO6
	CO : Course Outcome		
	BL : Bloom's Taxonomy Levels (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)		