END TERM EXAMINATION

FOURTH SEMESTER [BCA] JUNE 2024

Paper Code: BCAT -212	Subjects: Introduction to data Science
	(Batch -2021 Onwards)

Time: 3 Hours   Maximum Marks: 75

Note: Attempt five questions in all including Q. No.1 which is Compulsory. Select one Question from each Unit.

Q1   **Answer the Following**   5x5=25
  (a)   What are different Python Libraires?
  (b)   Explain the concept of slicing array with suitable example.
  (c)   What are different data security issues in data science?
  (d)   How linear regression helps in data science?
  (e)   How data frames are created from dictionary of series?

UNIT -I

Q2   (a)   What are different data pre-processing steps?   [8.5]
  (b)   Explain different applications of data science.   [4]

Q3   (a)   Explain different data collection strategies.   [8.5]
  (b)   What are different data science roles?   [4]

UNIT –II

Q4   What is role of descriptive statistics in Data Science? Explain with   [12.5]
suitable examples.

Q5   (a)   Here are the runs scored by a Cricket team in a league of 12   [8.5]
    matches – 110,120,100,150,110,140,130,180,120,250,140,110.
    Construct box plot for the same.   [4]
  (b)   What is difference between skewness and kurtosis?

UNIT –III

Q6   (a)   Write a code to implement different statistical function in   [6.5]
    Pandas.
  (b)   What is pivoting? Write a Python code to implement pivot() and   [6]
    Pivot- table() on data frame.

Q7   (a)   Explain the concept of broadcasting array in NumPy with   [6]
    suitable examples.
  (b)   What are different data types available in NumPy? How negative   [6.5]
    indexing is implemented in Numpy?

UNIT –IV

Q8   What is a role of data science in investigating clinical data? Explain   [12.5]
with suitable examples.

Q9   What is use of data science in forecasting demands? Explain with   [12.5]
suitable examples.

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