

SECTION - I

2. (i) How do you calculate maximum likelihood Estimation ? 10
(ii) Give a complete description about canonical correlation. 10
3. Describe the following : 20
(i) Parallel coordinate plot
(ii) Stacked histogram

SECTION - II

4. What is Dimension Reduction ? Describe the different common dimensionality reduction techniques. 20
5. Give a complete description about Generalized Linear models. 20

SECTION - III

6. Explain the following : 20
(i) Stationary and non-stationary time series data
(ii) Trend stationarity
7. Describe the following : 20
(i) Kaplan Meier survival density estimation
(ii) Cox proportional hazards model

SECTION - IV

8. Explain the following : 20
(i) Boot Strapping
(ii) Gene Expression
9. Describe the following : 20
(i) Demand Forecasting
(ii) LSH

Roll No.

23739

**M. Tech. 2nd Semester Artificial
Intelligence and Data Science
Examination – June, 2023**

DATA SCIENCE

Paper : 21MTAI22C3

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Section. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Write short notes on the following : 20
- (a) Mosaic Plot
 - (b) SVD
 - (c) Moving Average
 - (d) EHR Data

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P. T. O.