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# INTEGRATED PG DEGREE EXAMINATION, DECEMBER 2023
## Third Semester

INTEGRATED MSC COMPUTER SCIENCE- DATA SCIENCE

### CORE - ICSD3CR1 - INTRODUCTION TO DATA SCIENCE

2020 ADMISSION ONWARDS

EA4F970E

Time: 3 Hours

Weightage: 30

### Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. Define data science.

2. What are the difference between population and sample?

3. Define data model.

4. Explain the concept feature generation.

5. Discuss feature selection and its features in data science.

6. Define brainstorming.

7. Define forward selection.

8. What is Root Mean Squared Error(RMSE)? How to calculate it?

9. Define Dimensionality Reduction.

10. Which are the different categories and applications of Fraud detection?

(8×1=8 weightage)

### Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Explain the future of data science.

12. What is mean by overfitting and underfitting explain with examples?

13. Explain the Types of EDA in Data Science.

14. Explain the concept Data Science Process.

15. Explain about any 2 wrapper method in feature selection.

16. Discuss any 4 problems with nearest neighbour in recommendation system.

17. How the PCA algorithm performs in dimesionality Reduction?

18. Explain the importance of data visualization techniques.

(6×2=12 weightage)

## Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Explain in detail about datafication.

20. Explain Linear regression in detail.

21. Explain in detail about recommendation systems.

22. Explain the concept Singular Value Decomposition with examples.

(2×5=10 weightage)