QP CODE: 24045072

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Reg No : .....

Name : .....

M.Sc DEGREE (CSS) EXAMINATION, OCTOBER 2024

Third Semester

M.Sc ARTIFICIAL INTELLIGENCE

CORE - AI010302 - INTRODUCTION TO DATA ANALYTICS

2020 ADMISSION ONWARDS

01D4698C

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What is the importance of unstructured data in Data Science?
2. What is the purpose of data preparation?
3. What is ment by MLR model?
4. Explain about Polynomial regression.
5. What is confusion matrix?
6. Briefly discuss about Bayes' Theorem.
7. Differentiate between Binary classification and multiclass classification.
8. Discuss about Exploratory factor analysis.
9. What do you mean by Random Forest Algorithm?
10. What is the meaning of Bagging?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. What is the meaning of result evaluation in data science?
12. What are the functionalities of data mining?
13. Discuss about t- statistics in SLR model.
14. Explain about Regularization and variable selection method in MLR.

15. Explain Lazy Learners mechanism taking k-Nearest-Neighbor classifiers as example.

16. How does tree pruning works?

17. Explain about Exploratory factor analysis.

18. Explain about Random Forests.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Explain about data science process in detail.

20. a) Explain about correlation analysis
    b) Calculate the correlation coefficient for the following data: X = 4, 8 ,12, 16 and Y = 5, 10, 15, 20.

21. a) Explain about Linear discriminant analysis b) Explain the terms i) confusion matrix ii) ROC curve

22. Explain about step by step procedure for PCA with example.

(2×5=10 weightage)