



QP CODE: 26019615



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc Computer Science (Data Analytics)

ELECTIVE - CA860402 - BUSINESS DATA ANALYTICS

2020 Admission Onwards

60A3B01A

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. What is data and explain its types?
2. What is the need for normalization? What are the various normalization techniques?
3. Define Descriptive Statistics. Describe its various categories.
4. Differentiate between ordinal and nominal data.
5. Describe various charts and graphs in data visualization.
6. A coin is tossed 12 times. What is the probability of getting exactly 7 heads?
7. Define discrete uniform probability distribution with example.
8. What are the terminologies used in MapReduce algorithm?
9. Explain Spark in workflow systems.
10. Define Apache Sqoop. How it works?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Briefly explain the drivers for business analytics.
12. Describe the major skills required for a business analyst.





13. Calculate the standard deviation of the exam scores using the following data: Test taker : 1 2 3 4 5 6 7 8 9 10
Score : 20 40 60 60 75 80 70 65 70 90
14. Write short note on a). Heatmap b). Dashboards
15. a) Define triangular probability distribution. Consider the time required to complete the initial assessment face of constructing a corporate head quarters. The minimum value a is 6 months, maximum value b is 24 months, m is 12 months. Calculate the probability that the time required is less than 12 months. b) Calculate the probability that the project requires more than 10 months but less than or equal to 18 months.
16. Explain data sampling.
17. Write a short note on relational algebra operations.
18. Compare MongoDB and HBase.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain the applications of business analytics.
20. Calculate Covariance and Correlation Coefficient for the following data : X : 78, 79, 80, 80, 82, 83, 85, 86, 87, 87, 88, 88, 90, 92 Y : 23, 22, 24, 22, 24, 26, 27, 25, 28, 26, 29, 30, 31, 31
21. From the following data of marital status and if customer defaults on mortgage: a). What is the probability that a customer defaults on his or her mortgage b). What is the probability that a customer does not default on his or her mortgage c). Calculate the probability that a randomly selected customer is married and that the customer does not default on his or her mortgage. d). What is the probability that a randomly selected customer is single and that the customer does not default on his or her mortgage. e). Compute the probability that a customer defaults on his or her mortgage given that the customer is married.
22. Explain HDFS (i). components of HDFS architecture. (ii). Features of HDFS

(2×5=10 weightage)

