



NP – 400

V Semester B.C.A. Degree Examination, February/March 2024

(NEP) (Freshers)

COMPUTER SCIENCE

Data Analytics

Time : 2½ Hours

Max. Marks : 60

Instruction : Answer *all* the Sections.

SECTION – A

I. Answer **any four** questions. **Each** question carries **two** marks. (4×2=8)

- 1) Define the term Data Analytics.
- 2) Name any four data visualization tools used.
- 3) Explain the term Normal Distribution.
- 4) Define the following events :
 - i) Mutually exclusive
 - ii) Equally likely.
- 5) What is power query ?
- 6) What are Filters in Power BI ?

SECTION – B

II. Answer **any four** questions. **Each** question carries **five** marks. (4×5=20)

- 7) Write a note on Data Analytics Life Cycle.
- 8) Define Hypothesis. Explain the purpose of ANOVA in Hypothesis testing.
- 9) What are the various steps involved in any Analytics Project ?
- 10) State and prove Baye's Theorem.
- 11) The owner of Maumee Ford-volvo wants to study the relationship between the age of a car and its selling price. Listed below is a random sample of 10 used cars sold at the dealership during last year.

Age (years)	9	7	11	12	8	7	8	11	10	12
Selling Price (\$000)	8.1	6.0	3.6	4.0	5.0	10.0	7.6	8.6	8.0	6.0

Calculate the correlation coefficient between car's age and its sale price.

- 12) What are the advantages of Power BI ?

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SECTION – C

III. Answer **any four** questions. **Each** question carries **eight** marks. **(4×8=32)**

- 13) With an example explain the different types of analytics.
- 14) With a case study explain how analytics has helped the food industry to improve their business.
- 15) Define regression. Find the two regression equations for the data of 10 students in two subjects given below :

English	75	80	93	65	87	71	98	68	89	77
Economics	82	78	86	72	91	80	95	72	89	74

- 16) a) What are the various types of refresh options provided in power BI ? **(3+5)**
 b) What are the building blocks of Microsoft Power BI ? Explain.
- 17) a) What is the purpose of COUNT, COUNTA, COUNTBLANK and COUNTIF in Excel ? **(4+4)**
 b) List the difference between Logistic Regression and Linear Regression.
- 18) a) Differentiate between Dashboard and Reports. **(4+4)**
 b) Explain the different visualisation techniques used for spatial data.