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 ?

P.T.O.

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.