**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, November 2022**

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|  | **2BT3144** | Roll No. | Total Printed Pages: 1 |
| **2BT3144** |  |
| B. Tech. II Year III-Semester (Main/Back) End Semester Examination, November 2022  **(AIDS)** | |
| **BCEECE3112 : Fundamental of Data Science** | | | |

# Time: **3**Hours. Total Marks: **60**

Min. Passing Marks: **21**

Attempt **five** questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Use of following supporting material is permitted during examination for this subject.

# **1.--------------------------Nil--------------------** **2.------------------Nil-----------------------**

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|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** |  | Discuss the Roles in Data science process by its steps with neat diagram | **(12)** | **UNDERSTAND** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.2** | **(a)** | Classify the Facets of data. | **(6)** | **EVALUATE** |
|  |  |  |  |  |
|  | **(b)** | Enumerate the Roles in Data science process. | **(6)** | **UNDERSTAND** |
|  |  |  |  |  |
|  |  | **UNIT-II (CO2)** |  |  |
|  |  |  |  |  |
| **Q.3** |  | Explain about Levels of measurement of data with appropriate examples | **(12)** | **APPLY** |
|  |  | **OR** |  |  |
| **Q.4** | **(a)** | Demonstrate on Degree of freedom with example. | **(6)** | **APPLY** |
|  |  |  |  |  |
|  | **(b)** | Define Interquartile Range and how to calculate IQR using formulae and explain with an example. | **(6)** | **APPLY** |
|  |  |  |  |  |
|  |  | **UNIT-III (CO3)** |  |  |
|  |  |  |  |  |
| **Q.5** |  | Explain the techniques of Machine learning with example | **(12)** | **UNDERSTAND** |
|  |  | OR |  |  |
| **Q.6** |  | Find **FOUR** clusters from the following data points, (3,3),(27,25), (3,4), 4,5), (17,13),(5,7), (12,15), (15,17), (25,30),(27,32) using **K-means** algorithm | **(12)** | **UNDERSTAND** |
|  |  |  |  |  |
|  |  | **UNIT-IV (CO4)** |  |  |
|  |  |  |  |  |
| **Q.7** | **(a)** | Explain the features of Tableu. | **(6)** | **EVALUATE** |
|  |  |  |  |  |
|  | **(b)** | Explain the features of Power BI. | **(6)** | **EVALUATE** |
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| **Q.8** |  | Explain in detail about Visualizing Spatial Data with Online Geographic Tools. | **(12)** | **APPLY** |
|  |  |  |  |  |
|  |  | **UNITV (CO5)** |  |  |
|  |  |  |  |  |
| **Q.9** |  | Enumerate the Python Libraries for Data Science. | **(12)** | **EVALUATE** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.10** |  | Explain the importance and benefits of R in Data science. | **(12)** | **EVALUATE** |