# Priyadarshini College of Engineering, Nagpur
## Department of Information Technology
CAT-II Examination (2022-23) EVEN Semester
### B.Tech Sixth Semester
### Subject: Data Science

Time : 1.5 Hour

Max. Marks : 35

Note: .All Question carry marks as indicated.

| Q No. | | MCQ | CO | BT | Marks |
|---|---|---|---|---|---|
| Q1 | a) 1 | Which of the following are modules/libraries in python?<br>a) Numpy<br>b) Pandas<br>c) Matplotlib<br>d) All of the above | CO3 | 1 | 1 |
| Q1 | a) 2 | Important data structure of pandas is/are_____<br>a) Series<br>b) Data Frame<br>c) Both of the above<br>d) None of the above | CO3 | 1 | 1 |
| Q1 | b) | Describe computation on arrays with an example | CO3 | 2 | 5 |
| | | OR | | | |
| Q2 | a) 1 | A_____ is a one-dimensional array.<br>a) Data Frame<br>b) Series<br>c) Both of the above<br>d) None of the above | CO3 | 1 | 1 |
| Q2 | a) 2 | Which of the following library in python is used for plotting graph and visualization.<br>a) Pandas<br>b) Numpy<br>c) Matplotlib<br>d) None of the above | CO3 | 1 | 1 |
| Q2 | b) | Explain data manipulation with Pandasand Write a program of pandas with the help of pandas Dataframe. | CO3 | 2 | 5 |
| Q3 | a) 1 | Which library is used to create statistical graphics in Python?<br>a) Pandas<br>b) Numpy<br>c) Seaborn<br>d) Matplotlib | CO4 | 1 | 1 |
| | a) 2 | To import pyplot module we can write<br>a)Import matplotlib.pyplot<br>b)Import matplotlib.pyplot as plt<br>c)Import pyplot as plt<br>d)Both (A) and (B) | CO4 | 1 | |
| Q3 | b) | Explain visualization with matplotlib | CO4 | 2 | 5 |
| Q3 | c) | Summarize density and contour plots. | CO4 | 2 | |
| | | OR | | | |

| Q4 | a) 1 | Which function is used to create a histogram in Seaborn?<br>a) sns.lineplot()<br>b) sns.scatterplot()<br>c) sns.histplot()<br>d) sns.barplot() | CO4 | 1 | |
| --- | --- | --- | --- | --- | --- |
| Q4 | a) 2 | Matplotlib is _____ plotting library<br>a)2D<br>b)3D<br>c)Both (A) and (B)<br>d)None of the above | CO4 | 1 | 1 |
| Q4 | b) | Discuss data visualization with python seaborn | CO4 | 3 | 4 |
| Q4 | C) | Describe three dimensional plotting | CO4 | 2 | 8 |
| Q5 | a) 1 | Which of the following neural network is an auto-associative network?<br>a)that has no loops<br>b)that has feedback<br>c)that has only one loop<br>d) a single layer feed-forward neural network with pre-processing | CO5 | 1 | 1 |
| Q5 | a) 2 | The back propagation law is also known as generalized delta rule, is it true?<br>a)yes<br>b) no | CO5 | 1 | 1 |
| Q5 | b) | Illustrate steps for making decision tree | CO5 | 4 | 5 |
| Q5 | c) | Explain the neural networks in detail also write the pros and cons for the same | CO5 | 2 | 7 |
| | | **OR** | | | |
| Q6 | a) 1 | Which of the following is a Neuro software?<br>a) Software used to analyze neurons<br>b) Designed to help experts in the real world<br>c)It is a strong and easy neural network<br>d)It is software used by Neurosurgeon | CO5 | 1 | 1 |
| Q6 | a) 2 | Which of the following is true for neural networks?<br>a) It has a set of nodes and connections<br>b) Each node computes it's weighted input<br>c) A node could be in an excited state or non-excited state<br>d) All of these | CO5 | 1 | 1 |
| Q6 | b) | Explain feedforward neural network in detail | CO5 | | |
| Q6 | C) | Summarize the back propagation | CO5 | | |