NP – 437

VI Semester B.C.A. Examination, July/August 2024
(NEP Scheme)
COMPUTER SCIENCE
CA 27 : Machine Learning

Time : 2½ Hours Max. Marks : 60

Instruction *: Answer* ***all*** *Sections.*

SECTION – A

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

1) Mention the types of supervised machine learning.
2) What is dimensionality reduction ?
3) What is classification ? Give an example.
4) What is clustering ?
5) Write two differences between labelled data and un-labelled data.
6) How python programming will support machine learning process ?

SECTION – B

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

7) What is Scikit learn ? Explain its features.
8) Explain the differences between supervised and unsupervised learning.
9) Explain the limitations of k-mean clustering.
10) Write the applications of machine learning.
11) How Naive Bayes classifier works ?
12) Explain the steps involved in data preparation process.

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SECTION – C

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

13) a) Why visualizing the data is needed during data preparation ?

b) How to load the data and explore the data in ML ?

14) Explain the main challenges of machine learning.

15) a) Write Decision Tree algorithm and explain how it works.

b) What is K-NN algorithm ?

16) a) What is logistic regression ? Explain how it works.

b) Write a python code to use clustering in semi supervised learning.

17) a) Write the applications of DBSCAN.

b) Explain how a cluster formed in DBSCAN clustering algorithm.

18) Explain the essential libraries and tools required for machine learning projects.
