



NP – 416

V Semester B.C.A. Degree Examination, January/February 2026  
(NEP)

COMPUTER APPLICATION  
Data Mining (Elective – I)

Time : 2½ Hours

Max. Marks : 60

**Instruction :** Answer **any 4** questions from **each** Section.

SECTION – A

- I. Answer **any 4** questions. **Each** carries **2** marks. (4×2=8)
- 1) Define Data Mining.
  - 2) What is the difference between Classification and Clustering ?
  - 3) What is regression ?
  - 4) Define similarity measure with an example.
  - 5) What is meant by Association Rule in Data Mining ?
  - 6) What is out lies ?

SECTION – B

- II. Answer **any 4** questions. **Each** carries **5** marks. (4×5=20)
- 7) Explain the relationship between Data Mining and Knowledge Discovery in Databases (KDD).
  - 8) Describe the working principle of Bayesian Classification with an example.
  - 9) Compare ID3, C4.5 and CART decision tree algorithms.
  - 10) Explain the difference between Agglomerative and Divisive hierarchical clustering methods.
  - 11) Discuss the working of the Apriori Algorithm with a simple example of frequent itemset generation.
  - 12) Write short notes on :
    - a) Data Parallelism
    - b) Task Parallelism.



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## SECTION – C

III. Answer **any 4** questions. **Each** carries **8** marks.

(4×8=32)

- 13) Elaborate on the basic data mining tasks and explain the importance of ETL tools in data preparation.
  - 14) Discuss the various data mining issues and metrics and analyze the social implications of data mining with suitable examples.
  - 15) A dataset contains the following points for two classes :  
Class A : (1, 1), (2, 1), (2, 2)  
Class B : (4, 3), (5, 4), (6, 5)  
Classify the point (3, 2) using the K-Nearest Neighbor (K=3) algorithm (use Euclidean distance).
  - 16) Explain the K-Means Clustering Algorithm with a suitable example and illustrate one full iteration of centroid recalculation.
  - 17) Discuss clustering using minimum spanning tree.
  - 18) Discuss the parallel and distributed association rule mining.
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