2021

COMPUTER SCIENCE — HONOURS

Paper : DSE-A-2

(Data Mining and its Application)

Full Marks : 50

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer ***question no.*** **1** and ***any four*** questions from the rest.

1. Answer ***any five*** questions : 2×5

(a) Define Data Mining.

(b) State the differences between Training and Test datasets.

(c) What is classifier?

(d) Distinguish between Parametric and Non-parametric Learning.

(e) State the difference between pattern clustering and feature mapping.

(f) What do you mean by data integration?

(g) What is Web mining?

(h) Explain the difference between pattern association and pattern classification tasks.

2. (a) Why is pre-processing of data required in the Data Mining process?

(b) What is the utility of data cleaning?

(c) What do you mean by the extraction of data from the large dataset? 4+2+4

3. (a) What is the necessity of feature selection?

(b) State the processes of feature selection. 2+8

4. (a) What are the structural patterns of data?

(b) What are different tools for pattern recognition? 7+3

5. (a) What is a pattern clustering network?

(b) Explain how pattern clustering can be achieved by a Group of instars with binary output function. 5+5

6. (a) What do you mean by Minimum Distance classifier?

(b) What is meant by 'Similarity Measure'?

(c) Explain 'Nearest Neighbor' technique. 3+3+4

7. (a) Explain the concept of 'closeness' of data and 'smoothness' of a mapping function.

(b) State the difference between Data Warehousing and Data Mining. 5+5

8. (a) What is the usability of Data Warehousing?

(b) What are principal components of an auto-correlation matrix? 4+6

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