Sub Code: CSIT352

Paper Id: 910040 Roll No: | | | | | | | | | | | | |

M.TECH.
(SEM-III) THEORY EXAMINATION 2019-20
DATA MINING

Time: 3 Hours *Total Marks: 100*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION – A

1. You are required to answer **all** the parts of this question. (2×10=20 marks)
   (a) Define data mining.
   (b) What is decision tree?
   (c) What is classification?
   (d) Define Tree pruning.
   (e) What is cluster analysis?
   (f) What is dissimilarity of object?
   (g) What is the use of query optimization?
   (h) What are gamma codes?
   (i) Differentiate between unconstrained and constrained text.
   (j) Explain link analysis.

SECTION – B

2. Attempt any **three** parts of the following: (10×3=30 marks)
   (a) Explain Data mining Functionalities in detail.
   (b) Explain classification by back-propagation with suitable example.
   (c) What is tolerant retrieval? Explain with suitable example.
   (d) Explain Vector space scoring in detail.
   (e) Given two objects represented by the tuples (22,1,42,10) and (20,0,36,8) :
   - Compute the Euclidean Distance between the two objects.
   - Compute the Manhattan Distance between the two objects.
   - Compute the Minkowski Distance between the two objects, using q=3

SECTION – C

3. Attempt any **one** part of the following: (10×1=10 marks)
   (a) Discuss Decision tree-based classifiers in detail.
   (b) What is heuristic mining? Explain with suitable example.
4. Attempt any **one** part of the following: (10×1=10 marks)
   (a) What is time sequence discovery? Discuss in detail.
   (b) How do association rules differ from Traditional production rules? Explain.
5. Attempt any **one** part of the following: (10×1=10 marks)
   (a) How many types of clustering methods are there? Explain any one partitioning clustering algorithm.
   (b) Explain decision tree method for data clustering. Give the suitable example.
6. Attempt any **one** part of the following: (10×1=10 marks)
   (a) Explain Index construction. Discuss Dynamic indexing in detail.
   (b) Explain linear and non linear regression in detail with suitable example.
7. Attempt any **one** part of the following: (10×1=10 marks)
   (a) Write short notes on:
   - Inverted Indices.
   - Gap encoding.

   (b) Define Spatial Data? How mining of spatial data is done?

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