PAPER ID-311475

Subject Code: KCA012

Roll No: | | | | | | | | | | | | | |

MCA
(SEM III) THEORY EXAMINATION 2023-24
DATA WAREHOUSING & DATA MINING

TIME: 3 HRS **M.MARKS: 100**

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

SECTION A

1. Attempt *all* questions in brief. **2*10 = 20**

Qno	Questions	Marks	CO
a.	How Data Warehouse is different from Database?	2	1
b.	How Data Mining is different from Data Warehousing?	2	1
c.	Why is Data Transformation required?	2	2
d.	Discuss how regression is related to classification	2	3
e.	What do mean by support and confidence in association rule mining?	2	3
f.	Define Slice and Dice operation.	2	3
g.	What is data generalization?	2	4
h.	What is data Aggregation?	2	5
i.	What do you mean by temporal mining?	2	5
j.	Explain the concept of concept hierarchies in data mining.	2	2

SECTION B

2. Attempt any *three* of the following: **10*3 = 30**

a.	Write detail about the 3-tier architecture and the implementation of data warehouse with a neat diagram.	10	1
b.	Differentiate between the three main types of data usage: Information Processing, Analytical Processing and Data Mining. Examine the motivation behind OLAP mining.	10	2
c.	Find all frequent item sets for the given training set using Aprori Algorithm. TID ITEMS BOUGHT T100 (M, O, N, K, E, Y) T200 (D, O, N, K, E, Y) T300 (M, A, K, E) T400 (M, U, C, K,Y) T500 (C, O, O, K, E, Y)	10	3
d.	Examine how classification tasks performed by SVM.	10	4
.e.	Describe various OLAP operations with example.	10	5

SECTION C

3. Attempt any *one* part of the following: **10*1 = 10**

a.	Briefly discuss the three schemas for multidimensional databases that consists of 4 dimensions (Time, Branch, Item, Location). Include the appropriate measures required for the schemas.	10	2
b.	Discuss why do we need to pre-process the data. Mention the various tasks to be accomplished as part of pre-processing. Elaborate each.	10	2

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4. Attempt any *one* part of the following: 10 *1 = 10

a.	Draw the Data Warehouse architecture and discuss its various components.	10	1
b.	Discuss the various applications of Data Warehousing?	10	1

5. Attempt any *one* part of the following: 10*1 = 10

a.	How classification is different from clustering? Discuss Decision Tree based classification technique in detail.	10	3
b.	What do you mean by Data Extraction? Discuss the tools used for Data Extraction.	10	3

6. Attempt any *one* part of the following: 10*1 = 10

a.	How Bayes Theorem can be used for classification task? Explain	10	4
b.	Write short notes on i) CURE ii) DNSCAN	10	4

7. Attempt any *one* part of the following: 10*1 = 10

a.	Discuss in detail the security issues in Data Warehousing.	10	5
b.	Write Notes on i) Web Mining ii) Spatial Mining	10	5

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