Shri Vile Parle Kelavani Mandal's
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING
(Autonomous College Affiliated to the University of Mumbai)
NAAC Accredited with "A" Grade (CGPA : 3.18)

Department of Computer Engineering
A.Y. 2022-23
Continuous Assessment: Term Test – II

Max. Marks: 25	**Duration: 1 Hr.**
Class: TY B Division	**Semester: V**
Course: Data Mining and Warehousing	**Course Code: DJ19CEC501**
Program: Computer Engineering	

Instructions: (If any)
(3) Assume Suitable data if required.
(4) Figures to the right shows full marks of the Question.

Q. No	Questions	Marks
1	Apply Average link clustering approach to perform clustering on the given distance matrix. Also draw a neat dendrogram clearly depicting the levels of merge. Comment on anyone technique to find optimal number of clusters.	08
2	Consider the following transactions for the items: Asparagus (A), Corn (C), Beans (B), Tomatoes (T) & Squash (S) with Minimum support count= 3 and Confidence = 50%	08
3a	Explain the ETL process with suitable diagram	09
	OR	
3b	Describe the different types of changes with suitable example.	09

Item	A	B	C	D	E
A	0	1	2	2	3
B	1	0	2	4	3
C	2	2	0	1	5
D	2	4	1	0	3
E	3	3	5	3	0

Transaction – ID	Items
100	B, A, T
200	A, C
300	A, S
400	B, A, C
500	B, S
600	B, S
700	B, S, A, T
800	B, S
900	B, A, S

Apply Apriori algorithm to compute frequent Itemsets and generate strong rules.

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Department of Computer Engineering
Academic Year 2022-2023
Term Test – 2

Course Name: Artificial Intelligence | **Course Code: DJ19CEC503**
Class: TE (A & B) | **Sem:** V
Date: 24/11/2022 | **Time**: 02:00 – 03:00
Maximum Marks: 25

Instructions:

1. Question **Number 1** is Compulsory.
2. Attempt any **THREE** out of remaining questions.
3. Draw figures wherever required

Q. No	Questions	Marks
1.	Write a short note on any AI application.	04
2	Consider following example and its CNF form to prove the sentence "Did Curiosity kill the Cat?" using Resolution. Generate a Resolution graph for the same. "Jack owns a dog. Every dog owner is an animal lover. No animal lover kills an animal. Either Jack or Curiosity killed the cat, who is named Tuna. Did Curiosity kill the cat?". Conjunctive Normal Form $Dog(D)$ (D is a placeholder for the dogs unknown name (i.e. Skolem symbol/function). Think of D like "JohnDoe") $Owns(Jack, D)$ $\neg Dog(y) \vee \neg Owns(x, y) \vee AnimalLover(x)$ $\neg AnimalLover(w) \vee \neg Animal(y) \vee \neg Kills(w, y)$ $Kills(Jack, Tuna) \vee Kills(Curiosity, Tuna)$ $Cat(Tuna)$ $\neg Cat(z) \vee Animal(z)$ $\neg Kills(Curiosity, Tuna)$	07
3	Write following sentences into CNF. a) Marcus was a Roman. b) All men are people. c) Caesar was a ruler.	07

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	d) All Romans were either loyal to Caesar or hated him (or both). e) Everyone is loyal to someone. f) People only try to assassinate rulers they are not loyal to. g) Marcus tried to assassinate Caesar.	
4	Demonstrate Backward Planning with suitable example. Comment on significance of Planning Graph Technique.	07
5	Implement Perceptron Rule Training algorithm using f(net)=sign(net), c=1, $\Delta w_i = c(d - o_i)x_i$ and following data specifying the initial weight W^1 and two training pairs, $\mathbf{w}^1 = \begin{bmatrix}0\\1\\0\end{bmatrix}, \left(\mathbf{x}_1 = \begin{bmatrix}2\\1\\-1\end{bmatrix}, d_1 = -1\right), \left(\mathbf{x}_2 = \begin{bmatrix}0\\-1\\-1\end{bmatrix}, d_2 = 1\right)$ Calculate the weight after one complete cycle.	07

ALL THE BEST !!!

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A.Y. 2022-23

Continuous Assessment: Term Test – II

Max. Marks: 25	**Duration: 1 Hr.**
Class: TE Computer (A & B)	**Semester: 5**
Course: Processor Organization and Architecture	**Course Code: DJ19CEC502**
Program: .B.Tech in Computer Engineering	
Date: 25/11/2022	**Time 12:30-1:30**

Instructions:

(1) Check for internal options in questions.
(2) Attempt all the questions unless specified.
(3) Assume suitable data whenever/wherever applicable.

Q.No.	Question Description	Marks
Q.1 (a)	What are the various types of Instruction sets available in 8051 Microcontroller? Explain Data Transfer, Arithmetic and logical Instructions adequate suitable examples.	7
	OR	
Q.1 (b)	Differentiate between Macros and ~~Factorial~~ Procedures? Write an Assembly Language program to sort 5 numbers using macros.	7
Q.2 (a)	What is an Addressing Mode? Illustrate the various addressing modes of 8086 Microprocessor and Explain each one of them with an example.	**10**
	OR	
Q.2 (b)	What is a Dual Inline Package(DIP)? Illustrate the Pin configuration of 8086 Microprocessor in detail and specify the usage of each pin in brief.	**10**
Q.3	(a) Outline the various features of the Pentium Processor.	**4**
	(b) Write a short note on Pentium Superscalar architecture.	**4**

********** All the best **********

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Department of Computer Engineering
Academic Year 2022-2023
Term Test – II

Course Name: Advanced Database Management System **Course Code: DJ19CEEC5012**
Class: TE-A **Sem:** V
Date: 26/11/2022 **Time**: 12:30-1:30
Maximum Marks: 25

Instructions:

1. Please solve questions in order with clear and dark ink pens
2. Draw figures wherever required

Q. No	Questions	COs	Marks
1	Show fragmentation on following schema through **algebra query:** **PATIENT (NUMBER, NAME, SSN, AMOUNT_DUE, DEPT, DOCOTR, MED_TREATMENT)** **DEPARTMENT (DEPT, LOCATION, DIRECTOR)** **STAFF (STAFFNUM, DIRECTOR, TASK)** (i) DEPARTMENT horizontal fragmentation by location for any two locations (assume any location) (ii) Derived fragmentation of STAFF for the same locations used in (i) (iii) Mixed fragmentation of PATIENT (assume any predicate)	3	8
	OR		
	How recovery in distributed database is different from centralized database (2 marks)? Explain any one protocol used for recovery management in distributed database (6 marks)?	3	8

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2	Explain Discretionary Access Control. How Granting and Revoking of Privileges performed in Discretionary Access Control, also show query.	5	7
3	Explain structure of XML document with example? How document database is different from traditional databases?	4	5
4	Write short note on object oriented database.	6	5

ALL THE BEST