DEPARTMENT OF COMPUTER SC. AND ENGINEERING

MID TERM EXAMINATION

Subject Code : CS3402 | **Subject Name: Artificial Intelligence**

Time: 2 Hours | **Subject Teacher: Miss Tanu Priya**

Course Name: MCA(4TH SEM) | **Full Marks: 30**

Answer all questions.

Q1. (a) With the help of cryptarithmetic problem solve EAT+THAT=APPLE.

(b) Write the difference between A Star(+) algorithm and AO* Algorithm. Write about the uncertainty also about its sources. (2x5=10)

Q2. (a) Write about production system. Write about the importance of environment in AI.

(b) Solve this with the help of Eight File Puzzle. (2X5=10)

7	3	6
5		1
4	2	8

Q3. (a) Explain the uniform cost search algorithm with proper example. (2x5=10)

(b) Explain the n-queen problem also show the process for 8 n queen. (Stepwise)

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NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR
(An Institution of National Importance under MoE, Government of India)

Department of Computer Science and Engineering

Semester: Spring Semester 2023-24
Course Title: Artificial Intelligence
Full Marks: 50
Semester: M.C.A (2ND SEMESTER)

Examination: End Semester
Course Code: CS3402
Duration: 3 Hrs.

Faculty name :- Miss Tanu Priya

(Answer All Questions)

1. Solve this problem using eight file puzzles. [10]

2	1	5
8	4	7
	6	3

2. Shop A has 30 times of pure ghee and 40 tins of adultered ghee for sale, which shop B has 50 tins of pure ghee. One tin of ghee is randomly purchased from one of the shops and found to be adulterated. What is the probability that it was purchased from shop B? [10]

3. Write the applications for Natural language processing. Discuss about the architecture of expert system. [5]

4. What is the need of ANN in A.I? Explain the biological model of neuron with diagram. [5]

5. Explain the concept of Min-Max theorem with example. [5]

6. If TOM + NAG=GOAT, find the value of G+O+A+T. Solve using cryptoarithmetic. [5]

Q7. Explain the architecture of fuzzy logic system architecture. Write the application of ML. [5]

Q8. Explain the concept of Bayesian Belief Network [5]