CSAE 42: Artificial Intelligence

Instructor: Dr. Suraiya Jabin

Marks weightage: 5 (towards Theory Internal Assessment)

Note:
1. Collaborations on assignment works are not permitted.
2. Cheating and any other anti-intellectual behavior, including giving your work to someone else or downloading solution through Internet or copying your answers from your room mate or from back of the book, will be dealt with severity or may result in evaluation zero.
3. Assignments after the due date would not be accepted and will result in evaluation zero out of five.

Given on: Tuesday, May 19, 2020
Due on: Monday, May 27, 2020
Topics: Knowledge Representation

1. Represent the following sentences using Semantic net and Conceptual dependency.
(i) John gave a rose to Marry.
(ii) John is engineer and Marry is fair.
(iii) John ate ice cream with spoon.

2. What is the need for knowledge representation methods? Define and compare the following methods:
Frame, Script, Ontology

3. What do you mean by a Truth Maintenance System? How it facilitates non-monotonic reasoning? Consider the problem of deciding which clothes to wear using knowledge such as:
-Wear casual clothes unless they are not clean or important meeting occurs today.
-Wear a Sweater if it is cold.
-The winter is usually cold.
-Wear shorts if it's warm.
-The summer is usually warm.
Construct a JTMS network to represent these facts.
Try to solve the problem: In winter do I wear shorts?
Answer the question What shall I wear today (You may assume that the system knows the time of year).