BANKURA UNIVERSITY

BSc 6th Semester Hons Examination 2021

Subject: Computer Science

Course ID: 61511   Course Code: SH/CSC/601/C-13

Course Title: Artificial intelligence (Theory)

Full Marks: 25   Time: 1 Hr 15 min

The figures in the margin indicate full marks

UNIT-I

[1] Answer any 5 of the following questions: (1x5=5)

   a) What is artificial intelligence?
   b) What is meant by knowledge inference?
   c) What is contradictory sentence?
   d) Write one advantage of DFS.
   e) Translate the sentence - "Mangoes are sweet" into a formula in predicate logic.
   f) Construct a truth table for the expression (A∧(A V B))
   g) Write name of some intelligent systems.
   h) Write one difference between a frame and a script.

UNIT-II

[2] Answer any two of the following questions: (5x2=10)

   a) How do you measure exactly 2 gallons of water from a well using a 4-gallon jug and a 3 gallon jug? (Neither has any measuring mark on it).
   b) What is FOPL? Write the following expressions in FOPL:
      i.   All employees earning $1400 or more per year pay taxes.
      ii.   Some employees are sick today.
      iii.   No employee earns more than the President.   2+1x3=5
   c) Write down the importance of control strategy in production systems.
   d) What is resolution? Write down the algorithm of resolution.   1+4=5

UNIT-III

[3] Answer any one of the following questions: (1x10=10)

   a) What is Turing test? Write down the algorithm to build tic-tac-toe in AI. How many possibilities are there in the tic-tac-toe?   2+6+2=10

b) How a problem is solved using means end analysis? Write down the A* algorithm in AI. Write one application of A* algorithm.   4+5+1=10