

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2018 - 19 Examination

Semester: 1
Subject Code: 203202132
Subject Name: Introduction to Intelligent Systems

Date: 12/12/2018
Time: 10:30am to 01:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1** A) What is Intelligent System? Explain its Architecture & applications in brief. (05)
 B) Explain the Forward and Backward Reasoning. (05)
 C) Solve Water-Jug Problem using Production Rule System. (05)
- Q.2** Answer the following questions. (Attempt any three) (15)
 A) Solve The following Crypt arithmetic problem:
 C R O S S
 + R O A D S

 D E N G E R
 B) Explain Semantic Net and Frame with example.
 C) Explain tower of Hanoi problem using Hill Climbing.
 D) Explain fuzzy logic system architecture using real time application.
- Q.3** A) Explain the different issues in Knowledge representation. (07)
 B) Explain A* Algorithm with example. (08)
- OR**
- B) Explain Depth first search and Breadth first search with example. (08)
- Q.4** A) Define Artificial Neural Network. Explain Backpropagation Network with example. (07)
- OR**
- A) Assume the following facts :
 · John likes all kinds of food.
 · Apples are food.
 · Chicken is food.
 · Anything anyone eats and isn't killed by is food. (07)
 · Bill eats peanuts and is still alive.
 · Sue eats everything Bill eats.
 - Prove that John likes peanuts using Resolution.
- B) Explain Probability and Bay's Theorem using example. (08)