Dept. of Computer Engineering

First Exam, First Semester : 2016/2017

Course Title: Intelligent System Design + Machine Intelligence	**Date: 22/11/2016**
Course No: (630423+640424)	**Time Allowed: 50 minutes**
Lecturer: Dr. Mohammed Mahdi	**No. of Pages: 1**

Question 1:   *(12 Marks)*

Objectives: This question is about expert systems basic definitions.

It is required to scientifically define the following terms along with a simple engineering example: -

1. Knowledge.

2. Human expert.

3. Recommendation rules.

4. Knowledge engineer.

5. End-user.

6. Inference engine.

7. Forward chaining inference techniques.

8. Conventional programs.

Question 2:   *(8 Marks)*

Objectives: This question is about Fuzzy Logic.

Answer the following briefly: -

1. What is the main reason of using fuzzy logic in control?

2. Sketch the basic structure of the fuzzy logic controller. Why the rate of change of the input signal is used?

3. Why one should spread fuzzy sets over the whole universe of discourse?

4. What do we mean by fuzzy membership? Show with a simple example its three basic mathematical operations.