



Course Title: Intelligent System Design + Machine Intelligence
Course No: (630423+640424)
Lecturer: Dr. Mohammed Mahdi

Date: 27/3/2014
Time Allowed: 1 Hour
No. of Pages: 1

Question 1:

(10 Marks)

Objectives: This question is about expert systems general concepts.

Answer the following: -

- A) Sketch the general layout of an Expert System. Define each of its blocks. (2 Marks)
- B) Define the following terms: - knowledge base, static goals. (2 Marks)
- C) What is the role of each member in the expert system development team? (2 Marks)
- D) Does expert system make mistakes? (2 Marks)
- E) Give a simple example on each of classes of expert system rules. (2 Marks)

Question 2:

(10 Marks)

Objectives: This question is about rules inference techniques and Fuzzy Logic.

- A) Explain the following briefly: - (6 Marks)

Forward-chaining is suitable for:

- frequently accessed data,
- which are relatively static,
- which are small enough to efficiently store.

Backward-chaining is more suitable where:

- there is little scope for reuse of computed answers,
- the answers are dynamic,
- the "answer space" is too large to store.

- B) Explain the main structure of Fuzzy logic controller, and then explain where it is most used? (4 Marks)