



BCK-2372 Seat No. _____

**Fifth Year M. Sc. (C.A. & I.T.) (Sem. IX)
Examination**

April / May - 2014

902 : Artificial Intelligence

Time : 3 Hours]

[Total Marks : 70

- 1 Answer the following. 14
- a What is AI? What are the limitations of definition of AI?
 - b What are steps required to build a system to solve particular AI problem?
 - c Give two examples of Expert Systems.
 - d What is cognitive behavior?
 - e How Neural Network is characterized?
 - f Differentiate fuzzy logic and Boolean logic.
 - g What are fuzzy numbers and fuzzy arithmetic?
- 2 a Explain various application domains of AI. 7
- b When many Hill-Climbing Search fail to 7
 find solution? What are the ways of dealing
 with failure of the Hill-Climbing Search?

OR

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[Contd....

- 2 a How can we define problem as state space search? Explain with example. 7
- b List various heuristic techniques. Explain any one with example. 7
- 3 Answer any two of the following : 14
- a Explain the architecture of Expert System.
- b Explain the knowledge acquisition process in detail.
- c What are various techniques for non-formal logic representation? Explain any one in detail.
- 4 a Compare Artificial Neural Network with Biological Neural Network. 7
- b Explain Backpropagation Network with example. 7
- OR**
- 4 a Discuss various design issue related to the development of speech recognition system. 7
- b Explain perceptron learning with example. 7
- 5 Answer any two of the following : 14
- a Show that the logical operations defined for fuzzy logic are valid for Boolean logic also.
- b Explain the inference process in fuzzy logic.
- c What is fuzzy expert system? Describe various applications of fuzzy logic in brief.