Pokhara University

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| Level: Bachelor | Semester: Spring | Year : 2014 |
| Programme: BE | | Full Marks: 100 |
| Course: Artificial Intelligence & Neural Network | | Pass Marks: 45 |
| Time : 3hrs. |

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| *Candidates are required to give their answers in their own words as far as practicable.* |
| *The figures in the margin indicate full marks.* |
| Attempt all the questions. |

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|  | 1. Explain about Mycin–style probabilities used and its application. 2. What is the difference between forward chaining and backward chaining? 3. What are the required capabilities of an agent so that it is supposed to be intelligent? Explain. | 5  5  5 |
|  | 1. Compare and contrast knowledge and intelligence. 2. What are the characteristics of a Semantic networks? Explain with an example how can knowledge be represented with it? | 7  8 |
|  | 1. What is the significance of Baye's theorem? Explain, the need of reasoning under uncertainty. 2. What is truth maintenance systems. Describe the importance of truth maintenance system in knowledge representation. | 8  7 |
|  | 1. What is machine learning? Explain about learning by analogy with an example. 2. Compare and contrast Neural networks and Genetic algorithm with relevant examples. | 7  8 |
|  | 1. What is a perceptron. Explain the back propagation learning for a multilayer perceptron. 2. Explain the general architecture of expert system. Discuss about the major problems that current expert systems are facing. | 7  8 |
|  | 1. What are the steps in the process of NLP. Explain in detail. 2. Why do we need syntactic processing? Compare and contrast top down and bottom up parsing. | 7  8 |
|  | Write short notes on: **(Any two)**   1. Game Playing. 2. Frames. 3. Kohonen network. | 2×5 |