

**R16**

Code No: 136AG

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech III Year II Semester Examinations, May - 2019**

**ARTIFICIAL INTELLIGENCE  
(Computer Science and Engineering)**

**Time: 3 hours**

**Max. Marks: 75**

**Note:** This question paper contains two parts A and B.  
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART - A**

**(25 Marks)**

- 1.a) What are the problems underlying with AI? [2]
- b) Give a brief note on Intelligent Systems. [3]
- c) What is Knowledge Representation? [2]
- d) How can computer acquire knowledge? What is its role in problem solving? [3]
- e) What are the applications of expert systems? [2]
- f) Give a brief note on Certainty Factor Theory. [3]
- g) How do artificial neural networks work? [2]
- h) Explain the historical development of artificial neural networks. [3]
- i) Define NLP. [2]
- j) Discuss the importance and goals of the Natural Language Processing. [3]

**PART - B**

**(50 Marks)**

- 2.a) Discuss the characteristics of AI problem. Can Towers of Hanoi problem be considered as AI problem? Justify your answer with suitable discussions. [5+5]
- b) Explain the Heuristic Search Techniques. [5+5]
- OR**
- 3.a) Give a brief note on Alpha-Beta Pruning. [5+5]
- b) List and explain the applications of Artificial Intelligence. [5+5]
4. Discuss about Knowledge Representation using Frames. [10]
- OR**
- 5.a) Explain the Varieties of Logic. [5+5]
- b) Give a brief note on Axiomatic System. [5+5]
6. With the help of a neat diagram, explain the Expert System Architecture. [10]
- OR**
7. Discuss the Bayesian Belief networks with an example. [10]