

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)

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|------|--|-----|
| 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)

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|-----------|--|-------|
| 2.a) | Discuss the characteristics of AI problem. Can Towers of Hanoi problem be considered as AI problem? Justify your answer with suitable discussions. | |
| b) | Explain the Heuristic Search Techniques. | [5+5] |
| OR | | |
| 3.a) | Give a brief note on Alpha-Beta Pruning. | |
| 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. | |
| 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] |