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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]

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8. Describe the role of information gain in decision tree learning. [10]

OR

9. Write a short note on the following: [5+5]
a) Support Vector Machines
b) Radial-Basis Function Networks.

10.a) Give a brief note on Semantic Analysis. [5+5]
b) Explain the Universal Networking Knowledge.

OR

11. List and explain the applications of Natural Language Processing. [10]

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