

R15

Code No: 127AN

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, November/December - 2018

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 functionalities of an agent system? [2]
- b) How can we avoid ridge and plateau in hill climbing? [3]
- c) What are limitations in using Propositional Logic to represent the knowledge base? [2]
- d) Represent the following sentence in Predicate form: "All the children like sweet". [3]
- e) Compare Expert system with Traditional system. [2]
- f) State and define conditional probability. [3]
- g) Define supervised learning and unsupervised learning. [2]
- h) Differentiate ANN with Biological NN. [3]
- i) What is semantic web? [2]
- j) What is the importance of Parser? [3]

PART-B

(50 Marks)

- 2.a) What are sub-areas of AI? [5+5]
- b) Explain a simple approach to play Tic-Tac-Toe problem. [10]
3. Discuss about different Heuristic Search Techniques. [10]
4. What is Resolution? Explain resolution in propositional logic with illustration. [10]
- OR
- 5.a) Differentiate between Procedural and Declarative Knowledge. [5+5]
- b) Describe about Forward Chaining System. [10]
6. Explain Rule based system Architecture with neat diagram. [10]
- OR
7. Describe the following:
a) Dempster-Shafer Theory b) Certainty Factor Theory. [5+5]
8. Explain Inductive Learning and Deductive Learning with example. [10]
- OR
- 9.a) Explain design issues of Artificial Neural Networks. [5+5]
- b) Discuss about Recurrent Networks with example. [10]
- 10.a) What is Parsing? Derive a parse tree for the sentence "Bill loves the frog". [5+5]
- b) Write about semantic analysis in NLP. [10]
- OR

11. Explain in detail about several components of the Natural Language Processing. [10]