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.
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]

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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:
   a) Support Vector Machines
   b) Radial-Basis Function Networks. [5+5]

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

OR

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

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