R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, July/August - 2022
ARTIFICIAL INTELLIGENCE
(Computer Science and Engineering)

Time: 3 Hours   **Max.Marks:75**

Answer any five questions
All questions carry equal marks
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1.a)   Define Artificial intelligence in terms of acting humanly and thinking rationally.
 b)   Describe the factors of formulating a problem. Give the example of eight queen
        problem.   [7+8]

2.a)   Write a short note on model based reflex agents and utility based agents.
 b)   Give an overview of genetic algorithms. Give the advantages of it.   [7+8]

3.a)   Describe how Alpha-Beta search works with relevant examples.
 b)   How an intelligent backtracking is better than chronological backtracking explain with
        an example.   [7+8]

4.a)   Explain the job-shop scheduling problem with various constraints.
 b)   Describe the semantics of propositional logic with the truth table.   [7+8]

5.a)   What is meant by universal and existential quantification? Give examples for each.
 b)   Explain the resolution algorithm used for reasoning under first order logic with an
        example.   [7+8]

6.a)   Explain the steps used in knowledge engineering process with the example electronic
        circuit domain.
 b)   Write a short note on events and processes with examples.   [7+8]

7.a)   Explain about analysis of planning approaches.
 b)   Explain multi-agent planning.   [7+8]

8.a)   Explain about Bayesian nets with continuous variables.
 b)   Analyze the top–down inductive learning methods and inductive learning with inverse
        deduction.   [7+8]

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