

Code No: 157AM**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****- - -**

- 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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