

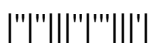
II B. Tech I Semester Regular Examinations, Feb/March - 2022
INTRODUCTION TO ARTIFICIAL INTELLIGENCE
 CSE (Artificial Intelligence)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions each Question from each unit
 All Questions carry **Equal** Marks
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- 1 a) Outline four basic kinds of agent programs that embody the principles of intelligent systems and explain each one in detail. [10M]  
 b) Explain various development phases of AI. Describe the importance of knowledge based systems, neural networks, scientific methods, intelligent agents and working with huge data sets. [4M]
- Or
- 2 a) Give the schematic view of the learning agent. How the components of agent program work together? Explain. [7M]  
 b) Write about various fields that contributed ideas, viewpoints and techniques to AI. [7M]
- 3 a) Describe the five components used for formulating well-defined problems and solutions. Explain with an example. [7M]  
 b) Present algorithm for searching AND-OR graphs generated by non-deterministic environments and explain the role of try and try again operations in it.. [7M]
- Or
- 4 a) What is uninformed search strategy? Explain breadth first search, uniform-cost search and bidirectional search strategies in detail. [7M]  
 b) Write the concepts of optimization problems, local minima and global minima. How these are obtained by hill climbing search algorithm? Illustrate it with 8-queens problem. [7M]
- 5 a) Present the simple algorithms for generic knowledge-based agent and explain how it can be fully autonomous in taking actions. [7M]  
 b) How to perform representation with objects through ontological engineering? Explain with suitable examples. [7M]
- Or
- 6 a) Write about the truth tables constructed for knowledge base and general algorithm for deciding entailment in propositional logic. [7M]  
 b) What is Internet shopping world problem? How it helps the buyer to products by following links and compares offers on the Internet? Explain. [7M]
- 7 a) Describe the process of constructing the Bayesian networks. How do they help in designing inference procedures? [7M]  
 b) Write about the concepts of full joint distributions, marginalization, conditioning and normalization. [7M]
- Or
- 8 a) How to represent the knowledge in uncertain domain with Bayesian networks? Explain with example. [7M]  
 b) How do agents handle uncertainty? Summarize its properties and related decisions taken by agents. [7M]



9 (i)Describe the scope of AI in future. (ii)Write its application in developing human less autonomous vehicles and on its rate of success. [7+7M]

Or

10 (i)Can machines really think or act intelligently. (ii)Explain the evolution of AI development and elaborate on advantages and disadvantages. [7+7M]

