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| **Velegapudi Ramakrishna Siddhartha Engineering College::Vijayawada**  **(Autonomous)**  III /IV B Tech Degree Examinations(April/2022)  Fifth Semester  **Department of Information Technology**  **20IT5205A - AI TOOLS, TECHNIQUES AND APPLICATIONS** | | | | | | | |
| Time:3Hrs | | | **MODEL QUESTION PAPER** | | Max Marks:70 | | |
| Part – A is Compulsory  Answer one (01) question from each unit of Part – B  Answers to any single question or its part shall be written at one place only | | | | | | | |
| ***Cognitive Levels(K): K1-Remember;K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create*** | | | | | | | |
| **Q. No** | | **Question** | | **Marks** | | **Course Outcome** | **Cog. Level** |
| **Part - A** | | | | **10X1=10M** | | | |
| 1 | a | List out the applications of AI | | 1M | CO1 | | K2 |
|  | b | Where can we use Decision tree | | 1M | CO2 | | K2 |
|  | c | Write the uses of NLP | | 1M | CO3 | | K2 |
|  | d | Define unsupervised learning | | 1M | CO2 | | K1 |
|  | e | Difference between Propositional Logic and First order Logic | | 1M | CO1 | | K2 |
|  | f | What is Knowledge based Agent? | | 1M | CO2 | | K1 |
|  | g | Define DFS | | 1M | CO1 | | K1 |
|  | h | Write about the reinforcement learning | | 1M | CO4 | | K1 |
|  | I | Distinguish syntax and semantics with an example | | 1M | CO1 | | K2 |
|  | j | Define artificial intelligence | | 1M | CO1 | | K2 |
| **Part - B** | | | | **4X15 =60M** | | | |
| UNIT - I | | | | | | | |
| 2 | a | Illuminate Back-tracking search algorithm in detail in CSP with an any application. | | 7M | CO1 | | K3 |
|  | b | Discuss the role of AI in dealing with current problems . | | 8M | CO1 | | K2 |
| (OR) | | | | | | | |
| 3 | a | How to provide the solutions for Well-defined problems. | | 8M | CO1 | | K1 |
|  | b | Write about any two Uninformed Search Strategies | | 7M | CO1 | | K2 |
| UNIT - II | | | | | | | |
| 4 | a | Write about decision trees and how they are useful in learning | | 10M | CO2 | | K4 |
|  | b | Illustrate how to update the probabilities of hypotheses when given evidence. | | 5M | CO2 | | K2 |
| (OR) | | | | | | | |
| 5 | a | Describe the role of uncertainty in Artificial Intelligence and interpret the basic Probability notation. | | 8M | CO2 | | K4 |
|  | b | Discuss the design of a Learning element that is affected by three major issues. | | 7M | CO4 | | K4 |
| UNIT - III | | | | | | | |
| 6 | a | List out explain the strategies for implementing NLP | | 8M | CO3 | | K2 |
|  | b | State how do chatbots guarantee the future of digital marketing? | | 7M | CO3 | | K6 |
| (OR) | | | | | | | |
| 7 | a | What is a Chatbot? Describe the process of how to build a chatbot. | | 8M | CO3 | | K4 |
|  | b | Write about best practice for chatbot development | | 7M | CO3 | | K6 |
| UNIT - IV | | | | | | | |
| 8 | a | Elucidate the working of Google’s Deepmind in AlphaGo | | 8M | CO4 | | K4 |
|  | b | Illustrate about action value function | | 7M | CO4 | | K2 |
| (OR) | | | | | | | |
| 9 | a | Describe the characteristics of the environment to determine right models for an AI | | 6M | CO4 | | K4 |
|  | b | Differentiate how AI is better than humans at games like Jeopardy | | 9M | CO4 | | K2 |