Code No: **20CS4501D**

**PVP20**

**PVP Siddhartha Institute OF TECHNOLOGY**

**(Autonomous)**

**III B.Tech - I Semester Regular Examinations**

**Artificial Intelligence**

**Duration: 3 Hours Max. Marks: 70**

1. Note: This question paper contains 5 essay questions with an internal choice.
2. Each question carries 14 Marks.
3. All parts of Question paper must be answered in one place

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5 x 14 = 70 Marks

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Q.No | Question | | Blooms Level | CO | Max. Marks |
| **UNIT-I** | | | | | |
| 1 | (a) | Define Artificial Intelligence. Explain any 5 real-time applications of AI technology. | 2 | CO1 | 7 |
| (b) | Analyze the Summarize the different types of agents? | 4 | CO4 | 7 |
| **OR** | | | | | |
| 2 | (a) | Differentiate the characteristics of Intelligent Agent. | 4 | CO4 | 7 |
| (b) | Discuss PEAS associated with AI Agent? List the properties of environments. | 2 | CO1 | 7 |
| **UNIT-II** | | | | | |
| 3 | Apply the Alpha-Beta pruning with a suitable example. | | 3 | CO2 | 14 |
| **OR** | | | | | |
| 4 | Analyze the A\* searching technique with an example. Discuss conditions for the optimality. | | 4 | CO4 | 14 |
| **UNIT-III** | | | | | |
| 5 | Differentiate forward and backward chaining with a suitable example. | | 4 | CO4 | 14 |
| **OR** | | | | | |
| 6 | Illustrate Resolution with examples. | | 3 | CO2 | 14 |
| **UNIT-IV** | | | | | |
| 7 | Analyze various components of a planning system? | | 4 | CO4 | 14 |
| **OR** | | | | | |
| 8 | Demonstrate planning with propositional logic to find the solution for the Wumpus world problem. | | 3 | CO3 | 14 |
| **UNIT-V** | | | | | |
| 9 | Relate the concept of logical formulation of learning with suitable example. | | 3 | CO3 | 14 |
| **OR** | | | | | |
| 10 | Analyze the major issues that affect the design of the learning element. | | 4 | CO4 | 14 |