**18CSD31**

**Hall Ticket Number:**

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| **III/IV B.Tech (Regular) DEGREE EXAMINATION** | | | |
| **August, 2021** | **Computer Science and Engineering** | | |
| **Sixth Semester** | **Artificial Intelligence** | | |
| **Time:** Three Hours | | **Maximum: 5**0 Marks | |
| *Answer Question No. 1 Compulsorily.* | | | (10X1 = 10 Marks) |
| *Answer* ***ANY ONE*** *question from each Unit.* | | | (4X10=40 Marks) |

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| 1. | a) | Define Intelligent agent. | CO1 |  |
|  | b) | Define Heuristic Function. | CO1 |  |
|  | c) | What is AND-OR graph? | CO1 |  |
|  | d) | What is horn clause? | CO2 |  |
|  | e) | What is unification? | CO2 |  |
|  | f) | Define refutation. | CO2 |  |
|  | g) | What is semantic network? | CO3 |  |
|  | h) | Define susman’s anomaly. | CO3 |  |
|  | i) | What is an expert system? | CO4 |  |
|  | j) | Define learning. | CO4 |  |
| **Unit - I** | | | | |
| 2. | a) | What is uninformed search? Briefly describe about any three uninformed search strategies. | CO1 | **10 M** |
|  |  | **(OR)** |  |  |
| 3. | a) | Explain A\* algorithm in detail. | CO1 | **5M** |
|  | b) | Explain about Constraint Satisfaction Problems. | CO1 | **5M** |
| **Unit – II** | | | | |
| 4. | a) | Explain Wumpus world and its representation using propositional logic. | CO2 | **10M** |
|  |  | **(OR)** |  |  |
| 5. | a) | Differentiate propositional and first order logic. | CO2 | **5M** |
|  | b) | Describe in detail about forward and backward chaining in propositional logic. | CO2 | **5M** |
| **Unit - III** | | | | |
| 6. |  | By considering an example blocks world problem, explain goal stack planning. | CO3 | **10M** |
|  |  | **(OR)** |  |  |
| 7. | a) | Explain about Hierarchical planning. | CO3 | **5M** |
|  | b) | Write a script for entering restaurant scene. | CO3 | **5M** |
| **Unit - IV** | | | | |
| 8. | a) | Describe in detail about expert system shells.. | CO4 | **5M** |
|  | b) | Explain about rote learning and it’s use. | CO4 | **5M** |
|  |  | **(OR)** |  |  |
| 9. | a) | Discuss in detail about Learning in Problem solving. | CO4 | **5M** |
|  | b) | Describe in detail about version space. | CO4 | **5M** |

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