

(3 HOURS)

[TOTAL MARKS: 100

N.B: (1) Q.1 is compulsory.

(2) Answer any four questions from Q2 to Q7

(3) Figures to the right indicate marks.

(4) Assume any additional information, but justify the same

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|-----|---|----|
| Q1. | a) What is artificial intelligence? Explain different models of intelligence.     | 10 |
|     | b) Comparison between Rules and principles for AI.                                | 10 |
| Q2. | a) Write down the steps for generating fuzzy rules with product space clustering. | 10 |
|     | b) Define and Compare Trees and Graphs with proper example.                       | 10 |
| Q3. | a) Explain natural language processing with various steps.                        | 10 |
|     | b) Explain K armed bandit problem.  | 10 |
| Q4. | a) Describe Knowledge Data Discovery Process with a Neat diagram.                 | 10 |
|     | b) Explain A* and Hill Climbing Algorithm.  | 10 |
| Q5. | a) Describe the concept of IS-A hierarchy with suitable scenario.                 | 10 |
|     | b) Define and Compare Symbol and Numbers  | 10 |
| Q6. | (a) Explain Bayesian network with proper diagram.                                 | 10 |
|     | (b) Explain resolution in predicate logic.  | 10 |
| Q7. | Write short notes on any <b>four</b> :  | 20 |
|     | a) Different Models of reasoning  |    |
|     | b) crossover and mutation over schemata   |    |
|     | c) Application of Artificial Intelligence   |    |
|     | d) Semantic Network   |    |
|     | e) Knowledge representation.  |    |

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