

**MIT ACADEMY OF ENGINEERING****COURSE CODE: CS312T****8 OCTOBER 2018****TY BTECH SEMESTER - V 2018 - 2019 EXAMINATION****DEPARTMENT OF COMPUTER ENGINEERING****IN COURSE EXAMINATION****ARTIFICIAL INTELLIGENCE AND NEURAL NETWORKS****TIME : 2 HOURS****MAX MARKS : 50 MARKS****TOTAL NO OF QUESTIONS: 05****TOTAL NO OF PRINTED PAGES : 01****INSTRUCTIONS TO CANDIDATES:**

1. Assume suitable data wherever necessary.
2. Non programmable scientific calculators are allowed.
3. Black figures to the right indicate full marks.

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|----------|--|-------------|--------------|-----------|
| <b>1</b> | <b>a)</b> Identify PEAS representation for following instances:          | <b>[06]</b> | <b>CO1</b>   | <b>L3</b> |
|          | i) Recommendation System   |             |              |           |
|          | ii) Vacuum Cleaner   |             |              |           |
|          | iii) Driver less car   |             |              |           |
|          | <b>b)</b> Classify types of rationality.                                 | <b>[04]</b> | <b>CO1</b>   | <b>L4</b> |
| <b>2</b> | <b>a)</b> Make use of heuristic function for any real time example.      | <b>[06]</b> | <b>CO2</b>   | <b>L3</b> |
|          | <b>b)</b> Compare Depth First Search & Breadth First Search.             | <b>[04]</b> | <b>CO2</b>   | <b>L4</b> |
| <b>3</b> | <b>a)</b> Evaluate 8 tiles problem using A* Algorithm.                   | <b>[10]</b> | <b>CO2</b>   | <b>L5</b> |
|          | OR   |             |              |           |
|          | <b>a)</b> Demonstrate following CSP                                      | <b>[10]</b> | <b>CO3</b>   | <b>L2</b> |
|          | i) Map Coloring Problem  |             |              |           |
|          | ii) Cryptarithmic Problem  |             |              |           |
| <b>4</b> | <b>a)</b> Infer reverting back process through backtracking algorithm.   | <b>[06]</b> | <b>CO3</b>   | <b>L2</b> |
|          | <b>b)</b> Demonstrate alpha beta pruning algorithm for gaming example.   | <b>[06]</b> | <b>CO3</b>   | <b>L2</b> |
| <b>5</b> | <b>a)</b> Discover the AI applications in field of automation. (any two) | <b>[08]</b> | <b>CO1,2</b> | <b>L4</b> |