

19P267

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Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2020

(CUCSS - PG)

CC19P CSS2 C09 - COMPUTATIONAL INTELLIGENCE

(Computer Science)

(2019 Admissions Regular)

Time: Three Hours

Maximum: 30 Weightage

PART A

Answer any *four* questions. Each question carries 2 weightage.

1. How heuristic is applied in games?
2. Illustrate production system and its categories.
3. Give a detailed account of logic programming.
4. Explain planning system and its components.
5. Discuss the role of reasoning in AI. How predicate logic is used in AI to represent knowledge?
6. Explain knowledge acquisition and knowledge engineering in detail.
7. What are the operators used in genetic algorithm? Explain its significance.

(4 x 2 = 8 Weightage)

PART B

Answer any *four* questions. Each question carries 3 weightage

8. Explain resolution in propositional and predicate logic with suitable example.
9. Explain Min-Max algorithm and alpha-beta cut-offs.
10. Write about Hopfield networks and back propagation.
11. Explain the architecture of expert system with a neat diagram and mention its features.
12. Describe Best First Search algorithm with example.
13. Discuss:
 - a) Characteristics, scope and applications of Artificial Intelligence.
 - b) Non-monotonic reasoning.

(4 x 3 = 12 Weightage)

PART C

Answer any *two* questions. Each question carries 5 weightage.

14. Explain how slot and filler structures are used for knowledge representation?
15. Explain machine learning and its types in detail.
16. Describe Hill Climbing. What do you infer from hill climbing search algorithm?

17. Describe:

- a) Forward and backward reasoning.
- b) Breadth First Search and Depth First Search with example.

(2 x 5 = 10 Weightage)
