



K18P 0753

Reg. No. : .....

Name : .....

Fourth Semester M.C.A. Degree (Regular/Supplementary/Improvement)  
Examination, July 2018  
(2014 Admission Onwards)

Elective – II : MCA4E05 : ARTIFICIAL INTELLIGENCE

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **any ten** questions. **Each** question carries **three** marks.

1. What are the applications of Artificial Intelligence ?
2. List out the significant features of predicate calculus.
3. How to improve the effectiveness of a search-based problem solving technique ?
4. Define rational agent.
5. What are various issues in knowledge representation ?
6. What are the different types of induction heuristics ?
7. Write the time and space complexity associated with depth limited search.
8. What is partial order planning ?
9. How forward chaining is different from backward chaining inference model ?
10. Difference between artificial life and social based learning.
11. What are the significant features of PROLOG in Artificial Intelligence ?
12. Mention the properties of conceptual graphs.

(10×3=30)



## SECTION - B

Answer **all** questions. **Each** question carries **ten** marks.

13. a) Discuss the importance of representation and search in Artificial Intelligence with suitable examples. 10
- OR
- b) Illustrate the use of predicate logic to represent the knowledge with appropriate examples. 10
14. a) Explain the structure and strategies for state space search with suitable examples. 10
- OR
- b) What are the uses of heuristic function, explain the importance of monotonicity and informedness using heuristic approaches briefly. 10
15. a) List out the building control algorithm for state space search, explain the significant features of each one. 10
- OR
- b) Explain with an example the logics for non-monotonic reasoning. 10
16. a) Compare and contrast model based and hybrid based systems used for strong problem solving with suitable examples. 10
- OR
- b) Explain the basic components and applications of expert system briefly. 10
17. a) Explain briefly about advanced plan generation systems with appropriate examples. 10
- OR
- b) Describe neatly active and passive reinforcement learning. 10