

M.C.A. IIIrd Year First Semester (CGS)
15539 : Artificial Intelligence
5 MCA 1

P. Pages : 2

Time : Three Hours



AV - 3285

Max. Marks : 80

- Notes :
1. Due credit will be given to neatness and adequate dimensions.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answer necessary with the help of neat sketches.
 4. Draw diagrams using pen only.
 5. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) Explain Basic List manipulating functions with example ? Explain setq function with syntax and examples ? 7
- b) State and explain syntax of "defun" & "cond" in LISP with example ? Write a LISP code to find maximum of 3 numbers ? 7

OR

2. a) Explain the importance of AI ? Define the term knowledge in AI. State and explain various terms related to knowledge in AI. 7
- b) State & explain concept of Iteration and Recursion with the suitable LISP program codes. 7
3. a) What do you mean by propositional logic ? Explain with suitable example the syntax and semantics for propositional logic. 7
- b) State and explain clausal conversion procedure in detail with suitable example. 7

OR

4. a) Explain Firstorder Predicate Logic (FOPL). State and explain syntax and semantics of FOPL with example. 7
- b) Explain the concept of statement in AI ? Enlist the properties of statement & explain with example. 7
5. a) Explain truth maintenance system & components with block diagram. 7
- b) Explain the following with example : 6
 - i) Default Reasoning
 - ii) Closed - World Assumption

OR

6. a) What do you mean by modal and Temporal Logic ? Explain with its operator & example. 7

- b) Explain the hierarchy of classes with example. 6
7. a) Explain Informed search process. State and explain Best First Algorithm with suitable diagram. 7
- b) State and explain Hill climbing search method in detail. 6

OR

8. a) Explain uninformed search process. State and explain Depth First Search algorithm with suitable diagram. 7
- b) Explain various measures of matching with example. 6
9. a) Explain different types of Inductive learning process in detail. 6
- b) Explain the process of Analogical Learning and Reasoning in detail. 7

OR

10. a) What are various performance measures in knowledge Acquisition. Explain in brief. 7
- b) Explain General Learning Model with diagram. Explain each component's role & its learning process. 6
11. a) Explain the following : 13
- i) Associative Architecture
 - ii) Frame Architecture
 - iii) Decision tree Architecture
 - iv) Neural Network Architecture

OR

12. a) Draw a neat diagram for expert system. Explain each component of expert system in detail. 7
- b) Explain Rule Based system Architecture with diagram. 6
