

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

P. Pages : 2
Time : Three Hours



AW - 3620
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) How is array and property list is used in LISP? Explain with example. 7
- b) Explain knowledge based system with the help of block. diagram. State the importance of KBS. 6

OR

2. a) Write a LISP code to reverse given list without using predefined function? 4
- b) What do you mean by REPL (Read evaluate print loop) with example in LISP? 2
- c) Explain how I/O functions and loops are used in LISP. Write proper program code. 7
3. a) Explain first order predicate logic (FOPL). State & explain syntax and semantics of FOPL with example. 7
- b) Explain Inference rules with suitable example. 7

OR

4. a) State and explain clausal conversion procedure in detail with suitable example. 7
- b) What are nondeductive inference methods? Explain in brief. 7
5. a) Explain completion and circumscription formulas used with respect to knowledge base. 7
- b) Define the relational properties: 6
 - i) Reflexive
 - ii) Transitive
 - iii) Symmetric

OR

6. a) Explain the hierarchy of classes with example. 6
- b) Explain truth maintenance system and its components with block diagram. 7
7. a) Explain uninformed search process state and explain depth first search algorithm with suitable diagram. 7

b) Explain various measures of matching with example. 7

OR

8. a) State and explain A* and AO* Algorithm with example. 7

b) Explain Hashed memory file organisation technique with suitable diagram. 7

9. a) What are different learning methods? Explain each in detail. 7

b) Explain Generalisation & Specialisation state & explain Generalisation Rules in detail. 6

OR

10. a) Explain different types of Inductive learning process in detail. 6

b) Describe the process of knowledge acquisition and enlist various performance measures in it. 7

11. a) Draw a neat diagram for expert system. Explain each component of expert system in detail. 7

b) Describe Associative system Architectures with example and Draw a neat diagram of ASA. 6

OR

12. a) Describe Non-productive system Architecture? Explain each non-productive system architectures with suitable diagram. 13
