

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

P. Pages : 2

Time : Three Hours



AU - 3170

Max. Marks : 80

- Notes : 1. Assume suitable date wherever necessary.
 2. Illustrate your answer necessary with the help of neat sketches.

- | | | | |
|----|----|--|---|
| 1. | A) | State & Explain basic list manipulation functions. With example. | 6 |
| | B) | Explain the importance of AI. Also explain importance of knowledge in AI. Define various terms related to knowledge in AI. | 7 |

OR

- | | | | |
|----|----|--|---|
| 2. | A) | How array & property list is used in LISP? Explain with example. | 7 |
| | B) | Explain how I/O functions and loops are used in LISP. With proper program code. | 6 |
| 3. | A) | Explain how natural language sentences are converted into special symbolic form in FOPL. Explain with example. | 7 |
| | B) | What is inference rule? Explain with example. | 7 |

OR

- | | | | |
|----|----|--|---|
| 4. | A) | Explain syntax & semantics of PL (Propositional Logic). | 7 |
| | B) | Explain the process of conversion of sentences into disjunctive normal form & conjunctive normal form using suitable examples. | 7 |
| 5. | A) | Explain TMS with suitable block diagram in detail. | 6 |
| | B) | What is object oriented system? How objects communicate with each other. | 7 |

OR

- | | | | |
|----|-----|---|---|
| 6. | A) | Explain | 7 |
| | i) | Temporal Logic | |
| | ii) | Closed world assumption. | |
| | B) | State & explain messages & methods in OOS. | 6 |
| 7. | A) | Explain the terms in context to knowledge based memory organization systems:- | 6 |
| | 1) | HAM | |
| | 2) | E-MOP | |
| | B) | Explain breadth first search algorithm. With steps & diagram. | 7 |

OR

- | | | | |
|-----------|----|--|---|
| 8. | A) | State & Explain A* & AO* Algorithm with example. | 6 |
| | B) | Explain indexing & retrieval technique. | 7 |
| 9. | A) | Explain Induction learning with example. | 6 |
| | B) | Explain General Learning Model with diagram. | 7 |
| 10. | A) | State & explain the concept of Generalization & specialization with example. | 7 |
| | B) | Explain analogical learning and reasoning process in detail. | 6 |
| 11. | A) | State & explain Black board system architecture. With diagram. | 7 |
| | B) | What is rule based system architectures? Explain. | 7 |
| OR | | | |
| 12. | A) | Draw & explain neat diagram for Expert system. | 7 |
| | B) | Describe Associative system architectures with example. | 7 |
