

PC-1914/M

L-22/2050

ARTIFICIAL INTELLIGENCE-224
(Semester-IV)

Time : Two Hours]

[Maximum Marks : 70

Note : Attempt any *four* questions. All questions carry equal marks.

1. Discuss in detail various approaches to knowledge representation.
2. What is resolution? Discuss all the steps to convert following wff to clause form :
 $\forall x : [Roman(x) \wedge know(x, Marcus)] \rightarrow$
 $[hate(x, Caesar) \vee (\forall y : \exists z : hate(y, z) \rightarrow$
 $thinkcrazy(x, y))]$
3. What are scripts? Write a script for Restaurant by considering various assumptions.
4. Discuss in detail the concept of knowledge organization and manipulation. Also discuss various issues in knowledge organization and manipulation.

5. What is nonmonotonic reasoning? Discuss the logics for nonmonotonic reasoning in detail.
6.
 - (a) Discuss various string manipulation function in Prolog programming language.
 - (b) Discuss compound objects in Prolog programming language.
7. Discuss how domain knowledge is represented and used in expert system.
8. Discuss and differentiate in detail Syntactic processing and Semantic analysis.
9.
 - (a) What are various issues in knowledge representation?
 - (b) Write a note on Semantic Nets.
 - (c) Discuss Semantics of Predicate Logic.
 - (d) What are various application areas of AI?
 - (e) What are various types of Learning? Discuss briefly.
 - (f) Discuss briefly any *one* implementation issue of nonmonotonic reasoning.
 - (g) What are elementary data types in Prolog programming language?
 - (h) What are various features of Prolog?
 - (i) Discuss components of Planning System.
 - (j) Discuss Expert System Shell.