



12. (a) Explain about semantic network with its architecture and explain how it is used for knowledge representation.

Or

- (b) (i) Given :

- (1) Marcus was a man.
- (2) Marcus was a Pompeian.
- (3) All Pompeians were Romans.
- (4) Caesar was a ruler.
- (5) All Romans were either loyal to Caesar or hated him.
- (6) Everyone is loyal to someone.
- (7) People only try to assassinate rulers they are not loyal to.

Answer the following questions :

(A) Represent the above sentences in Predicate Logic. (7)

(B) Can we make a conclusion as "Marcus was not loyal to Caesar?" (4)

- (ii) Explain the rules of Conceptual dependency with suitable example. (5)

13. (a) Describe the applications of Bayesian networks for reasoning.

Or

- (b) (i) What is Truth Maintenance System (TMS)? How does it help? (10)

- (ii) Consider the following sentences : (6)

- All ostriches are birds
- Tweety is a bird
- Sam is not an Ostrich

Answer the following using non-monotonic reasoning methods :

- (1) Is Sam is a bird?

14. (a) Explain the architecture of model based reflex agent and goal based agent.

Or

- (b) Discuss briefly the various stages in natural language processing with suitable examples.

15. (a) Write notes on the Knowledge Acquisition technique in expert system.

Or

- (b) Discuss the different types of non production system architecture.