Department of Computer Science
SUBJECT:- ARTIFICIAL INTELLIGENCE AND EXPERT SYSTEM
Class:- M.Sc I Sem(NEP)
Question Bank

UNIT I

1. **Explain water jug problem stating state space.**
2. **Explain with example constraint satisfaction.**
3. **Explain the A* algorithm with suitable example.**
4. **Give an overview of Steepest-Ascent Hill climbing algorithm.**
5. **Discuss the AI problem.**
6. **List the different AI techniques used to solve it.**
7. **Write notes on : (1) Best-first Search. (2) Constraint Satisfaction.**
8. **List the different problem and production system characteristics.**
9. **Explain Design of Search Algorithm with example.**
10. **Explain with example constraint satisfaction.**
11. **Give an overview of Steepest-Ascent Hill climbing algorithm.**
12. **Explain different problem characteristics in detail.**
13. **Define state space and explain with example.**
14. **Explain Means-end analysis**

UNIT II

1. **Explain issues of knowledge representation.**
2. **Discuss expert system in detail.**
3. **What are the computable functions and predicates ?**
4. **Explain natural deduction in detail.**
5. **Differentiate between Forward and Backward Reasoning.**
6. **Write notes on : (1) Control knowledge. (2) Expert system.**
7. **Explain computable function and predicates.**
8. **Explain computable function and predicates**
9. **Explain alpha beta cut-offs.**
10. **Write the concept of Non-linear planning with suitable example.**
11. **Explain Min-Max algorithm with an example.**

12. What are the components of planning systems.
13. Explain Hierarchical planning with example.
14. Discuss the components of planning system. Why it is needed ?
15. Explain alpha beta cut-offs.

UNIT III

1. Write the concept of Non-linear planning with suitable example
2. Explain Hierarchical planning with example.
3. Discuss the components of planning system. Why it is needed ?
4. Why understanding is needed ? Explain understanding as constraint satisfaction.
5. Explain unification grammars and semantic analysis.
6. Explain use of pattern recognition in AI.
7. Write note on Syntactic processing.
8. What are the advantages of Distributed Reasoning System.
9. Discuss the understanding as constraint satisfaction.

UNIT IV

1. Explain the concept of resolution.
2. Discuss additional refinements.
3. Explain psychological modelling.
4. Explain alpha beta cut-offs .
5. Write the concept of Non-linear planning with suitable example.
6. Explain Min-Max algorithm with an example.
7. What are the components of planning systems.
8. Explain use of pattern recognition in AI.
9. Write note on Syntactic processing.
10. What are the advantages of Distributed Reasoning System.
11. Discuss the understanding as constraint satisfaction.
12. Define depth first search.
13. Explain the concept of resolution.
14. Discuss additional refinements.