SIDDHARTHA
INSTITUTE OF TECHNOLOGY & SCIENCES
(UGC-AUTONOMOUS)
(Affiliated to JNTUH, Approved by AICTE, Accredited by NBA & NAAC with A+ grade, nirf Ranked & an ISO certified institution)

IMPORTANT QUESTIONS(UNITWISE)

SUBJECT NAME: AI **SUB CODE: CS603PC**

YEAR:2024-25 **YEAR: III-II**

UNIT-I

PART-A

S.No.	Coverage	Questions
1	UNIT-I	What is intelligent agent?
2	UNIT-I	What is well defined problem?
3	UNIT-I	What are the applications of Artificial Intelligence?
4	UNIT-I	Differentiate uniformed and informed search.
5	UNIT-I	What are the different types of agents?
6	UNIT-I	Define Heuristics function.
7	UNIT-I	Explain backtracking algorithm in artificial intelligence.
8	UNIT-I	What is knowledge based agents?
9	UNIT-I	Explain hill climbing search.
10	UNIT-I	What are bidirectional search?
		PART B
11	UNIT-I	Described and explain breadth first search with algorithm.
12	UNIT-I	What are the problem faced by local search algorithm? Explain
13	UNIT-I	How does one perform local search in continuous spaces?
14	UNIT-I	What is simple problem solving agent? Explain it briefly.
15	UNIT-I	Discuss gready best first search algorithm
16	UNIT-I	What is bidirectional search? Explain in details
17	UNIT-I	Explain depth first search algorithm with example.
18	UNIT-I	How A* algorithm works ? explain with example.
19	UNIT-I	What are informed and uninformed search strategies in ai.
20	UNIT-I	Explain uninformed cost search in ai.

UNIT-II

PART-A

S.No.	Coverage	Questions
1	UNIT-II	What is game tree?
2	UNIT-II	What are csp in ai?
3	UNIT-II	Explain optimal decision in games.
4	UNIT-II	What is game playing?
5	UNIT-II	Define backward chaining.
6	UNIT-II	Define an inference procedure.
7	UNIT-II	How does constraint propagation contribute to solving constraint satisfaction problems?
8	UNIT-II	What is backtracking search in csp?
9	UNIT-II	Why node pruning is imp in ai?
10	UNIT-II	What is Mini –Max Strategy?
		PART B
11	UNIT-II	Differentiate in between propositional logic and predicate logic
12	UNIT-II	Explain constraint satisfaction problem in details.
13	UNIT-II	Describe how alpha-beta search works with relevant examples.
14	UNIT-II	What is the diff between horn clauses and definite clauses in ai?
15	UNIT-II	What is resolution? Explain resolution algorithm for proposition logic
16	UNIT-II	Write simple forward chaining algorithm?
17	UNIT-II	Explain the concept of adversarial search in the context of AI. How does it apply to games, and what are the challenges associated with this approach?
18	UNIT-II	Explain constraint propagation in ai.
19	UNIT-II	What are forward and backward chaining in ai?
20	UNIT-II	Discuss the importance of representing uncertainty and how it is handled in the Wumpus World?

UNIT-III

PART-A

S.No.	Coverage	Questions
1	UNIT-III	Define atomic and complex sentence in first order logic.
2	UNIT-III	What is first order logic?
3	UNIT-III	Explain about first order inference.
4	UNIT-III	What is structured knowledge representation?
5	UNIT-III	Define an inference procedure
6	UNIT-III	Difference between Logic programming and PROLOG.
7	UNIT-III	Define backward chaining.
8	UNIT-III	Define Logic representation.
9	UNIT-III	Define Semantic network.
10	UNIT-III	Define First-Order Logic.
		PART B
11	UNIT-III	Explain the role of "quantifiers" in first-order logic and their impact on logical reasoning.
12	UNIT-III	Using a consistent vocabulary, represent the following sentences in First-order logic. i. Some students took French in Spring 2001. ii. Every student who takes French passes it. iii. Only one student took Greek in Spring 2001.
13	UNIT-III	Explain the syntax and semantics of first order logic.
14	UNIT-III	What is knowledge engineering in first order logic?
15	UNIT-III	Analyze steps in knowledge engineering process.
16	UNIT-III	Write detail note on Unification and Lifting?
17	UNIT-III	Write about Backward Chaining?
18	UNIT-III	Explain reasoning with default information.
19	UNIT-III	Give diff in Propositional vs. First-Order Inference
20	UNIT-III	Explain imp of knowledge representation in ai.

UNIT-IV

PART-A

S.No.	Coverage	Questions
1	UNIT-IV	What is mean by Ontological Engineering?
2	UNIT-IV	Define Mental Events in Knowledge Representation
3	UNIT-IV	Definition of Classical Planning.
4	UNIT-IV	What are the Classical Planning Approaches?
5	UNIT-IV	Define State-Space Search
6	UNIT-IV	Define Planning Graphs
7	UNIT-IV	Explain classical planning.
8	UNIT-IV	Compare contingent planning and online replanning.
9	UNIT-IV	Explain classical Planning with an Example
10	UNIT-IV	What is reasoning with default information?
		PART B
11	UNIT-IV	Differentiate between forward planning and backward planning approaches.
12	UNIT-IV	Describe the role of temporal constraints and deadlines in planning algorithms
13	UNIT-IV	Define hierarchical planning and its significance in solving complex problems?
14	UNIT-IV	Describe the challenges and techniques for handling incomplete or inconsistent domain models in planning.
15	UNIT-IV	Explain the Algorithms for Planning with State-Space Search.
16	UNIT-IV	Explain Categories and Objects in Knowledge Representation.
17	UNIT-IV	Explain the Analysis of Planning Approaches in Classical Planning.
18	UNIT-IV	Explain differentapproaches of knowledge representation.
19	UNIT-IV	Explain the different issues in knowledge representation
20	UNIT-IV	Explain Planning Graphs.

UNIT-V

PART-A

S.No.	Coverage	Questions
1	UNIT-V	What is mean by Full Joint Distributions?
2	UNIT-V	What are the Semantics of Bayesian Networks?
3	UNIT-V	Define Relational and First-Order Probability.
4	UNIT-V	Define Probabilistic Reasoning.
5	UNIT-V	What is Dempster-Shafer Theory?
6	UNIT-V	Define First-Order Probability.
7	UNIT-V	Define over fitting.
8	UNIT-V	State bayes rule.
9	UNIT-V	What is approximate inference in Bayes network?
10	UNIT-V	Explain inference with full joint distribution.
		PART B
11	UNIT-V	Explain the Bayes' Rule and it's Uses.
12	UNIT-V	How does uncertainty arise in Artificial Intelligence?
13	UNIT-V	Explain the Approximate Inference in Bayesian Networks in Uncertain Knowledge and Learning Uncertainty.
14	UNIT-V	Explain Basic Probability Notation.
15	UNIT-V	What is the need for probability theory in uncertainty
16	UNIT-V	Explain the Conditional Independence relations in Bayesian Network.
17	UNIT-V	What is the Dempster-Shafer theory in AI? Explain
18	UNIT-V	How to Representing Knowledge in an Uncertain Domain.
19	UNIT-V	Explain Inference using Full Joint Distributions in Uncertain Knowledge and Learning Uncertainty.
20	UNIT-V	Explain baye's rule with example, write application.