

S No.	Question	Unit Number	Marks
1	Classify the percentage of students who like English also like Mathematics.	General	5
2	What are the differences and similarities between problem solving and planning?	General	5
3	Discuss the steps needed to convert a WFF in predicate logic into clause form.	General	10
4	List various components of natural language understanding process. Describe syntactic analysis and semantic analysis in brief.	General	10
5	What do you mean by state space representation?	Unit 1	2
6	What is decision tree?	Unit 1	2
7	Role of AI in today's era.	Unit 1	2
8	What is an expert system?	Unit 1	2
9	Define Artificial Intelligence.	Unit 1	2
10	What is declarative knowledge?	Unit 1	2
11	What is a search graph?	Unit 1	2
12	What is state space?	Unit 1	2
13	Multi-agent environment	Unit 1	2
14	Search graph	Unit 1	2
15	Artificial Intelligence	Unit 1	2
16	Intelligent agent	Unit 1	2
17	Define First-Order Logic.	Unit 1	2
18	Define Modus Ponens' rule in propositional logic.	Unit 1	2
19	Express 'A car without wheels is not valuable' in predicate logic.	Unit 1	2
20	What are Conflict Resolution Strategies?	Unit 1	2
21	Major reasons for growth of intelligent agents.	Unit 1	2
22	What is state space search?	Unit 1	2
23	What is the role of intelligent agents in solving AI problems?	Unit 1	2
24	What is the role of AI in game playing?	Unit 1	2
25	What is a search tree?	Unit 1	2
26	Explain decision tree.	Unit 1	2
27	What do you mean by AI? Explain contribution of AI in various fields.	Unit 1	5
28	Explain Knowledge based system in detail with suitable example.	Unit 1	5
29	Discuss the various issues and challenges in Artificial Intelligence.	Unit 1	5
30	Differentiate between tree and graph structures.	Unit 1	5
31	Discuss the various issues and challenges in Artificial Intelligence.	Unit 1	5
32	What are the characteristics of AI problem? Explain with the help of example.	Unit 1	10

S No.	Question	Unit Number	Marks
33	Differentiate between tree and graph structures.	Unit 1	10
34	Discuss the various application areas of Artificial Intelligence.	Unit 1	10
35	What is heuristic search?	Unit 2	2
36	What do you mean by open list?	Unit 2	2
37	Define random search?	Unit 2	2
38	Heuristic search	Unit 2	2
39	Depth first search	Unit 2	2
40	Best, first search	Unit 2	2
41	Random search	Unit 2	2
42	Need of heuristic functions.	Unit 2	2
43	What are the shortcomings of heuristic search?	Unit 2	2
44	What is backtracking?	Unit 2	2
45	Explain Depth First Search, in detail.	Unit 2	5
46	Explain Breath First Search in detail with suitable example.	Unit 2	5
47	Explain any one game search technique in Artificial Intelligence.	Unit 2	5
48	Search algorithm is one of the best and popular techniques used in path-finding.	Unit 2	5
49	Write an algorithm for calculating minimax decisions. What is the role of alliances in multiplayer games?	Unit 2	5
50	Differentiate between perfect decision game and imperfect decision game.	Unit 2	5
51	Write the alpha-beta search algorithm. Explain the role of transposition with the help of an example.	Unit 2	5
52	Explain random search with closed and open list.	Unit 2	5
53	Explain Beat First Search and Game Search, in detail with suitable examples.	Unit 2	10
54	Explain A* algorithm in detail with suitable examples.	Unit 2	10
55	Discuss the searching algorithm with closed and open list. Give suitable example.	Unit 2	10
56	Differentiate between depth first and breadth first search.	Unit 2	10
57	What is A* algorithm and how it is different from other search strategies? Explain with the help of suitable example.	Unit 2	10
58	Explain Fuzzy logic.	Unit 3	2
59	Define inference engine.	Unit 3	2
60	Define probability.	Unit 3	2
61	Define conditional probability.	Unit 3	2
62	Probabilistic reasoning	Unit 3	2
63	Bayesian networks	Unit 3	2
64	Conditional probability	Unit 3	2

S No.	Question	Unit Number	Marks
65	Hidden Markov model	Unit 3	2
66	What is probabilistic reasoning?	Unit 3	2
67	State the Bayes rule.	Unit 3	2
68	What is an inference engine?	Unit 3	2
69	Explain hidden Markov model in detail.	Unit 3	5
70	Explain Bayesian Network with suitable examples.	Unit 3	5
71	Describe the concept of conditional probability in detail.	Unit 3	5
72	Explain how the Bayesian networks are represented and constructed?	Unit 3	5
73	Define conditional probability and explain Bayes rule in detail.	Unit 3	10
74	How Bayesian networks are represented? Explain.	Unit 3	10
75	Write short notes on Hidden Markov Model and Direct Utility Estimation.	Unit 3/General	5
76	Write short notes on Bayesian Networks and Game Search.	Unit 3/Unit 2	5
77	What do you mean by policy iteration?	Unit 4	2
78	What do you mean by utility theory?	Unit 4	2
79	What is dynamic programming?	Unit 4	2
80	Markov decision process	Unit 4	2
81	Policy iteration in Markov decision process	Unit 4	2
82	Markov decision process	Unit 4	2
83	Partially observable Markov decision process	Unit 4	2
84	What is Markov decision process?	Unit 4	2
85	What do you mean by MDP? Explain.	Unit 4	5
86	What do you mean by Utility functions, explain in detail?	Unit 4	5
87	How does utility functions work in Markov decision process?	Unit 4	5
88	How does value iteration work in Markov decision process?	Unit 4	5
89	Explain with the help of suitable example Markov Decision Process.	Unit 4	5
90	Explain the Markov property in detail. What is utility theory?	Unit 4	5
91	Explain Partially observable MDP's and State Space Representations.	Unit 4/Unit 1	10
92	What is rule based learning?	Unit 5	2
93	Define temporal difference learning.	Unit 5	2
94	Q-learning algorithm in reinforcement learning	Unit 5	2
95	Temporal difference learning	Unit 5	2
96	Passive reinforcement learning	Unit 5	2

S No.	Question	Unit Number	Marks
97	Adaptive dynamic programming	Unit 5	2
98	What is Q-learning algorithm in reinforcement learning?	Unit 5	2
99	What is adaptive dynamic programming?	Unit 5	2
100	What is reinforcement learning?	Unit 5	2
101	Explain adaptive dynamic programming with suitable example.	Unit 5	5
102	Explain Passive reinforcement learning in detail.	Unit 5	5
103	Discuss the Q-learning algorithm in reinforcement learning.	Unit 5	5
104	What do you mean by Reinforcement Learning? Explain practical applications of RL.	Unit 5	10
105	Explain adaptive dynamic programming and active reinforcement learning in detail with appropriate examples.	Unit 5	10
106	Describe the importance of Q-learning algorithm in reinforcement learning with the help of suitable illustrations.	Unit 5	10
107	Differentiate between active reinforcement learning and passive reinforcement learning.	Unit 5	10
108	Explain Temporal Difference Learning and A* algorithm.	Unit 5/Unit 2	10