V.V.P. ENGINEERING COLLEGE
DEPARTMENT OF INFORMATION TECHNOLOGY
Question bank

Sem: 8th IT
Sub: Artificial Intelligence

Sr. No.	Questions	Marks	Bloom's level	University year
	UNIT 1			
1	What is A.I.?	3	R	
2	A.I. Techniques and its properties.	7	R	
3	Explain various types of AI tasks.	4	U	Winter - 2018
	UNIT 2			
4	Give state space representation of following problem.	7	A	
	--> Chess Hill Climbing	7	A	
	--> Water jug	7	A	Winter - 2018
	--> 8-puzzle	7	A	
	--> Traveling salesman	7	A	Summer- 2018
	--> Missionaries and cannibals	7	A	
	--> Tower of Hanoi	7	A	Summer- 2018
	--> Monkey and bananas	7	A	
5	Issues in building system to solve A.I. Problems	7	U	
6	Define state space search	3	R	
7	Explain production system and its characteristics	7	U	
8	Advantages of DFS and BFS	7	R	
9	Issues in design of search programs	4	U	
10	Solve problem using production rules system (water jug)	7	A	Winter - 2018
11	Explain Steepest Hill Climbing Algorithm.	7	U	Winter - 2018
12	Explain and Compare DFS & BFS Algorithm.	7	U	Summer - 2018, Winter - 2018
13	Explain Best-First-Search / Greedy Search Procedure with a suitable example.	7	U	Winter - 2018, Winter - 2017

14	Explain A* Algorithm.	7	U	Winter - 2018
15	Discuss Constrain Satisfaction Problem.	7	R	
16	Explain Means-End Analysis Approach to solve AI Problems.	7	U	Winter - 2018
17	Explain 'Local Maximum', 'Plateau' and 'Ridge'	7	U	
	UNIT 3			
18	Approaches to knowledge representation / Types of knowledge	7	R	
19	Explain relational knowledge and inheritable knowledge	7	U	
	UNIT 4			
20	Short note on instance and ISA relationship.	7	R	
21	Issues in knowledge representation	7	U	
	UNIT 5			
22	Consider the following sentences and Answer a, b, c given below: 1. Rama likes all kinds of vegetarian food. 2. Oranges are food. 3. Mutton is food. 4. Anything anyone eats and is not killed by is food. 5. Likex eats peanuts and is still alive. 6. Lovex eats everything Likex eats. (a) Translate these sentences into formulas in Predicate Logic. (b) Prove that Rama likes peanuts using Backward Chaining. (c) Prove Rama likes peanuts using Resolution.	7	A	Winter - 2017, Winter - 2018
23	Assume the following facts. a) Steve only likes easy courses. b) Science courses are hard. c) All the courses in the basket weaving department are easy. d) BK301 is a basket weaving course. Use Resolution to answer the question, "What course would Steve like?"	7	A	
24	Resolution / conversion to clause form.	7	R	
25	Algorithm: Convert to clause form.	4,7	R	
26	Prove sentence from predicate logic.	7	U	
27	Explain the algorithm of predicate logic resolution.	4	U	
	UNIT 6			

28	Explain non monatonic reasoning.	3	U	Summer-2016, winter 2017, winter 2018
29	Explain monotonic reasoning.	3	U	Summer-2016
	UNIT 7			
30	Write a short note on a. Probability and bye's theorem b. Dempster – Shafer theory	7	U	winter 2017
31	Discuss various defuzzification methods.	4	N	summer 2018
	UNIT 10			
32	What is planning? Why it is required?	4,7	R	
33	Explain Minimax algorithm. Also describe Minimax optimizations.	7	U	Winter - 2018
34	Explain Goal stack planning with example.	4	U	Winter - 2018
	UNIT 14			
35	What are the Applications, Features and Limitations of Prolog?	7	A	Summer-2016, summer 2018
36	Discuss cut and fail in prolog with example.	7	A	summer 2019
37	Write a Prolog program to solve Tower of Hanoi Problem.	4	A	winter 2017
38	Write a prolog program to count vowels in a list of characters.	4	A	summer 2018
39	Write a prolog program to find the sum of elements of a List.	4	A	summer 2017
40	Write a prolog program to compute factorial of a given number	4	A	winter 2018, summer 2019
41	Write a prolog program to find the sum of first N natural number.	4	A	summer 2016, summer 2017