

1 x 15=15



BRAINWARE UNIVERSITY

Term End Examination 2022 Programme – B.Tech.(CSE)-2017/B.Tech.(CSE)-2018/B.Tech.(CSE)-2019/B.Tech. (CSE)-2020

Course Name – Artificial Intelligence Course Code - BCSE504B/PEC-501C (Semester V)

Full Marks: 60 Time: 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A (Multiple Choice Type Question)

(i) The Key task of a problem-solving agent is given by b) To find out which sequence of action will a) Solve the given problem and reach to goal get it to the goal state c) Both a and b d) None of these (ii) Give the agent name that does the problem generator concept?

b) Observing agent

c) Reflex agent d) None of the mentioned (iii) The agents select actions or task on the basis of priority, called . .

a) Utility based agents b) Model based reflex agents

c) Goal based agents d) None of these

(iv) A state space search is formulated by ___

a) Learning agent

Choose the correct alternative from the following:

a) Intermediate state b) Initial state

c) Successor function, which takes current d) None of these action and returns next immediate state

(v) The concept that hiding detail representation is known as ____

a) Extraction b) Abstraction c) Information Retrieval d) Data mining

(vi) The concept of perceptron implemented by _

a) Feed-forward neural network b) Back-propagation algorithm

c) Back-tracking algorithm d) Feed Forward-backward algorithm

(vii) The search technique that continually moves in the direction of increasing value that is uphill

a) Up-Hill Search b) Hill-Climbing

c) Reverse-Down-Hill search d) None of the mentioned

(viii) Limitation of propositional logic can be removed by

a) Pre-Propositional Logic b) Boolean Logic

c) First-Order-Predicate Logic d) None of these

(ix) Best approach for Game applications	
a) Linear approach	b) Heuristic approach (Some knowledge is stored)
c) Random approach(x) New states are generated in genetic algorithm	d) An Optimal approach by
a) Compositionc) Cross over(xi) A graph that is used to represent the semantic	b) Mutation d) Both b and c network
a) Undirected graph c) Directed Acyclic graph (DAG) (xii) Forward chaining also known as	b) Directed graph d) Complete graph
a) Type of knowledgebasec) Type of learning(xiii) Regression method is a example of	b) Type of planning d) Method of reasoning
a) Semi-supervised learning models.c) Supervised learning models.(xiv) Transforms the fuzzy value into the crisp value	b) Reinforcement learning modelsd) unsupervised learning models.
a) defuzzification Modulec) both of these(xv) IF-THEN also known as a process	b) knowledge base d) None of these
a) defuzzification c) Data base	b) Rule based system d) knowledge base
Group-B	
(Short Answer T	Type Questions) 3 x 5=15
2. Explain DFS with iterative deepening in AI.	(3) PR
Differentiate Fuzzy logic and set theory. 3. Explain with some example about different types	(3) of production system? (3)
Prepare a short note about Bayes Network 4. Explain Beam Search with the help of an example	(3)
Explain the fundamental goal of Knowledge Repr 5. Illustrate the concepts of MinMax algorithm with	esentation. (3)
Using Diagram explain Agent Architecture. 6. Express 4-Queen problem and solve it with the h	(3)
Prepare a short note about Hill climbing search	(3)
Group-C	
(Long Answer T	ype Questions) 5 x 6=30
7. Explain Turing test?8. Define Strong Al and Weak Al.	(5) (5)
Define the advantages of an expert system. 9. Explain Beam Search with an example.	(5) (5) OR
Explain Dempster-Shafer theory of uncertainty of 10. Contruct the relationship between machine lead	management. (5)
Explain knowledge based system in the context	

11. Differentiate DFS, BFS and Bi Directional search

OR

(5)

- Explain with the help of an example how inheritance is achieved in Semantic networks? (5) 2. "Measure the following into first-order predicate logic. i) Every gardener likes the sun. ii) (5)
- 12. "Measure the following into first-order predicate logic. i) Every gardener likes the sun. ii) (One can fool all of the people some of the time. iii) All purple mushrooms are poisonous. "

"Prepare a semantic network with the help of a diagram for the following set of knowledge: ABC is a university. CSE, ECE and EEE are three departments in it. Sudha works in department of CSE.CSE is located in C block. She is a professor. Every professor engages lectures and has PhD qualification. Sudha's area of interest in AI."
