AINA

IMPORTANT QUESTIONS (44) CSE III A&B

UNIT- I

1) What is AI? Explain any four Approaches of AI?

2) Compare a computer and a Human Brain and Explain how a human Brain process the Information

3) Explain About AI Intelligent Agents? Explain with Architectures?

4) What is Rationality? What are steps for problem formulation

5) Applications and History of Artificial Intelligence

Unit - II

1) describe the following Search methods with Algorithm, functionality program and Example?

> DFS

> BFS

> A*

> greedy best first Search

> Heuristic Search

> Adversial Search

2) Applications of all searching techniques

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2) difference between

DFS & BFS with Example?

3) Example of heuristic Search techniques?

4) 8-Queens problem?

5) Min-Max Algorithm with Example of 2-Ply game

6) α-β pruning Impementation with Algorithm and procedure

7) Steps for find Solution optimally?

9) define

> State Space > path cost > step cost
> goal Node
> path
> fringe?

8) Explain Uneform Cost Search techniques and differciate between A* Search and best first Search.

UNIT - 3

1) Define the terms

a) Logic Agents b) Knowledge Base Agents

2) Wumpus world logic implementation with procedure?

3) Define proportional logic? Explain the Syntax & Symantics of it?

4) What is Resolution? Solve the Wumpus world logic by using resolution principle?

5) Convert the predicate logic sentences to the CNF Normal form

By using

> AND Elimination

> By Implication Elimination

6) Forward chaining Algorithm &

Backward " " in propositional

Logic

UNIT-4

1) define the terms

> first order logic

> first order inference

2) difference between inference logic and first order logic ?

3) define the term Unification along with Algorithm ?

4) Resolution in first order logic with Algorithm

5) Converting the Sentences from first order logic into ~~PNF~~ CNF

By using methods

> Unification (ground terms)

> Eliminating Quantifiers

> representing in predicate logic

> demorgan law

> AND Elemination etc

6) forward & Backward chaing in the first order log.

Neural networks

UNIT – V

① Describe & Explain All the Modles of Neuron with a digram

> Artifical neuron Model (Mc-Culoch Model)

> perceptron Model (RosenButt Model)

> Biological Model (Nerve cell)

② Application and History of the neuron network

③ describe and explain all the 6 learning laws

④ define the terms

> Neural dynamics — Active
> — Synaptic

> Topology of NN

UNIT - 6

1) define the '3' basic functional units
   > feed forward network
   > feed Back network
   > Competetive learing networns
   Along with network diagram and Behaviour?

2) describe the All the patlern Recognise task of all functional units Along with diagrams?

3) what is the Importance of Hidden layer? describe the 2 important learning strategies

4) what is linear Sepalability? Explain the pattern classification problem?

a) Explain the perceptron model used for patter classification network

b) perceptron Convergence Theorem

(6) Explain the linear Associative network. and determine their weights By Computab.

(7) Describe Back propagation network used for patter Mappins By

> derivation

> diagram

> phases of Network

> Error detection

> Stopping Criteria

> limitations

(8) > define the Terms

> Linear Inseparability

> gradient Descent Method

UNIT – 7 (feedback networks)

(1) > describe the behavior of linear Auto Assoct FF n/w with Computation.

(2) What is patter storage networks and why Hopfield model is suitable for it?

(3) define the Terms

> Hopfield ~~model~~

> capacity of Hopfield model

> Energy Analysis "

> ~~stat~~

Unit – 8

(1) > define Competitive learning network along with description of each Component?

(2) > describe Feature Mapping network with Network Stucture and functnalby

(or)

> Kohnens Self Organisation Map

(3) What is Associative Memory

(4) describe BAM and BAM Architecture