SRI BHARATHI ARTS & SCIENCE COLLEGE FOR WOMEN ,KAIKKURICHI,PUDUKKOTTAI

SUBJECT   : ARTIFICIAL INTELLIGENCE

SUBJECT CODE : P16CSE2B

2MARKS

1)What is an Artificial Intelligence?

Artificial Intelligence   is the study of how to make computers do thing which at the moment.

AI sometimes called machine intelligence is intelligence demonstrated by machine in contrast to the natural intelligence displayed by humans.

2)What is an AI Techniques?

*   Heuristics

*   Support vector machine

*   Artificial neural networks

*   Markov decision process

*   Natural language processing

3)What are the requirements of control strategies?

Control strategy in AI scenario is a technique or strategy tells us about which rule has to be applied next while searching for the solution of a problem within problem space.

It helps us to decide which rule has to apply next without getting stuck at any point.

4)Explain the state space representation ways?

State space search is a process used in the field of computer science, including artificial intelligence in which successive configurations or states of an instance are considered.

With the intention of finding a goal state with a desired property.

5)Define Water Jug Problem?

In the water jug problem in Artificial Intelligence, we are provided with two jugs: one having the capacity to hold 3 gallons of water and the other has the capacity to hold 4 gallons of water.

There is no other measuring equipment available and the jugs also do not have any kind of marking on them.

UNIT 2

1)Define Heuristic search?

Heuristic search refers to a search strategy that attempts to optimize a problem by iteratively improving the solution based on a given heuristic function or a cost measure.

A classic example of applying heuristic search is the traveling salesman

problem

2)What are Strategies of Generate-and-test ?

Generate-and-test search algorithm is a very simple algorithm that guarantees to find a solution if done systematically and there exists a solution.

ALGORITHM: GENERATE-AND-TEST

1.Generate a possible solution.

2.Test to see if this is the expected solution.

3.If the solution has been found quit else go to step 1.

3)Explain the definition of classes of reduction system?

*   Monotonic Production System

*   Partially Commutative Production System

*   Non-Monotonic Production Systems:

*   Commutative System

4) Define Hill climbing?

Hill Climbing Algorithm in Artificial Intelligence. Hill climbing algorithm is a local search algorithm which continuously moves in the direction of increasing elevation/value to find the peak of the mountain or best solution to the problem.

Hill Climbing is mostly used when a good heuristic is available.

5)Define Means-Ends Analysis ?

Means-Ends Analysis in Artificial Intelligence. Means-Ends Analysis is problem-solving techniques used in Artificial intelligence for limiting search in AI programs.

It is a mixture of Backward and forward search technique. The MEA technique was first introduced in 1961 by Allen Newell, and Herbert A.

UNIT 3

1) Define Resolution?

Resolution method is an inference rule which is used in both Propositional as well as First-order Predicate Logic in different ways.

This method is basically used for proving the satisfiability of a sentence. In resolution method, we use Proof by Refutation technique to prove the given statement

2)How to explore the representing fashion logic?

The philosophical definition is that logic is a description of how one should think. In the context of AI, logic is "formal," which means it resembles math in its clarity and lack of ambiguity.

There are lots of different kinds of logics out there (temporal logics, ethical logics, etc.).

3)Define Computable Function?

In the example we explored in the last sectional the simple facts were expressed as combination of individualpredicates. Such as   try assassinate(Marcus,Casear)

4)What are the conversion to clause form?

Convert to clause form:

Convert the following statement to clause form:

$\forall x[B(x) \rightarrow (y [Q(x,y) \exists \wedge] P(y)]$

$\wedge] \exists \ y [Q(x,y) \wedge Q(y,x)]$

$\wedge \forall \ ] y [\ B(y) \rightarrow \ E(x,y)])]]$

5)Define Natural Deduction?

Natural Deduction (ND) is a common name for the class of proof systems composed of simple and self-evident inference rules based upon methods of proof and traditional ways of reasoning that have been applied since antiquity in deductive practice.

UNIT 4

1)Define Matching?

Matching is the process of comparing two or more structures to discover their likenesses or differences.

The representations will be given in one or more of the formalisms like FOPL, networks, or some other scheme, and matching will involve comparing the component parts of such structures

2)What are Backward chaining rule system?

Backward chaining is the logical process of inferring unknown truths from known conclusions by moving backward from a solution to determine the initial conditions and rules.

Backward chaining is often applied in artificial intelligence (AI) and may be used along with its counterpart, forward chaining.

3)Define Procedural representation?

In artificial intelligence, procedural knowledge is one type of knowledge that can be possessed by an intelligent agent.

A well-known example is the procedural reasoning system, which might, in the case of a mobile robot that navigates in a building, contain procedures such as "navigate to a room" or "plan a path".

4)Explain Problem of Indexing?

One way to select applicablerules.Comparing each one is precondition to the current state and extracting all the ones that match.

There are two problems.All of this does not mean that indexing cannot be helpfull even when the precondition,

5)What are the approaches of problem in Conflict Resolution ?

Conflict Resolution in AI. A method for choosing a rule to fired in a given cycle is called conflict resolution. In forward chaining,

BOTH rules would be fired. Rule 2 is fired first as the topmost one, and as a result, its THEN part is executed and linguistic object action obtains value stop

UNIT 5

1)What are Additional refinement?

*   Waiting for Quiescence

*   Secondary search

        *using book moves

        *alternative to minimax

 2)Explain Iterative -Deeping?

        One such idea is Iterative deeding originally used in a program called CHESS.

        Rather than searching to a fixed deapth in the game tree CHESS.

        There are two types of ALGORITHMS,

*   Depth -First Iterative Deeping

*   Iterative -Deeping-A*

3)How to use Book moves?

    The use of book moves in the opening sequence and endgames combined with the use of the minimax search procedure for the midgame.

4)Define Perception?

     Perception in Artificial Intelligence is the process of interpreting vision, sounds, smell, and touch.

        Perception helps to build machines or robots that react like humans. Perception is a process to interpret, acquire, select and then organize the sensory information from the physical world to make actions like humans.

5)Define Actions?

    Action selection. In artificial intelligence and computational cognitive science, "the action selection problem" is typically associated with intelligent agents and animates— artificial systems that exhibit complex behavior in an agent environment.