

**CS607 Artificial Intelligence Solved Objective
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Most of the solution spaces for problems can be represented in a _____

- **Graph (Page# 21)**
- Table
- Demo

By getting grips on _____ that deal with searching techniques in graphs and trees, problem solving can be performed in an efficient manner.

- Pseudo code
- **Algorithms (Page# 21)**
- Charts
- Graphs

Every graph can be converted into a tree.

- **True (Page# 22)**
- False

In Breadth First Search the node with the largest value of height will be at the _____ priority to be picked.

- **Maximum (Page# 25)**
- Minimum
- None of the given

Breadth-First Search checks all paths of a given length before moving on to any longer paths.

- True
- **False (Page# 28)**

Breadth-first search is a good idea when you are confident that the branching factor is _____

- Extremely small
- Small
- Medium
- **Large (Page# 32)**

The foothill problem occurs whenever there are _____ peaks.

- High
- **Secondary (Page# 39)**
- Primary
- Deep

The Plateau problem comes up when there is a mostly flat area _____ the peaks.

- **Separating (Page# 40)**

- Joining
- Over
- None of the given

Which one of the problem is more subtle, and consequently, is more frustrating:

- Foothill problem
- Plateau
- **Ridge (Page# 40)**
- Box

The paths found by best-first search are likely to be _____ than those found with other methods.

- None do the given
- **Shorter (Page# 47)**
- Longer

In Basic Genetic Algorithm the term mutation refers to a small random _____.

- Number
- **Change (Page# 77)**
- Operator
- Operand

Which of the following two components are closely coupled and each is intrinsically tied to the other.

- Knowledge representation
- Reasoning
- Execution
- Planning

- i & iii
- ii & iii
- iii & iv
- **i & ii (Page# 89)**

Semantic networks are graphs, with nodes representing _____ and arcs representing _____ between objects.

- **Objects, relationships (Page# 97)**
- Relationships, distance
- Objects, distance
- Distance, relationships

A proposition is the statement of a _____.

- **Fact (Page# 98)**
- Equation
- Action
- Theorem

_____ Reasoning is based on forming, or inducing a „generalization“ from a limited set of observations.

- Deductive

- Abductive
- **Inductive (Page# 102)**
- Analogical

An _____ is "A computer program designed to model the problem solving ability of a human expert."

- **Expert system (Page# 111)**
- Intelligent System
- Echo System
- Energy System

Another expert system named _____ was developed by Digital Equipment Corporation, as a computer configuration assistant.

- **R1/XCON (Page# 112)**
- MYCIN
- Dendral
- R3/XCON

An expert system may replace the expert or assist the expert.

- **True (Page# 113)**
- False

Conventional programming focuses on _____, while ES programming focuses on _____

- **Solution, Problem (Page# 122)**
- Problem, Solution
- Problem, Expert
- Solution, Expert

In backward chaining terminology, the hypothesis to prove is called the _____.

- Proof
- **Goal (Page# 126)**
- Plan
- None of the given

"The branch of computer science that is concerned with the automation of intelligent behavior" this definition is from:

- **Luger and Stubblefield (Page# 8)**
- Winston
- Schalkoff
- Bellman

In Artificial Intelligence GA stands for Genetic Algorithms

- **True (Page# 77)**
- False

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- **Inductive reasoning (Page# 102)**
- Deductive reasoning
- Analogical reasoning
- Common-sense reasoning

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In GA, the random process is repeated until an individual with required _____ level is found.

- Higher
- Lower
- **Fitness (Page# 86)**
- Logical

Mutation can be as simple as just flipping a bit at random or any number of bit

- **True (Page# 79)**
- False

Genetic algorithm uses evolutionary techniques, based on function optimization and artificial intelligence, to develop a solution.

- **True (Page# 77)**
- False

We can get optimal solution given some parameters using Genetic Algorithm.

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- Theorem
- **Fact (Page# 94)**

An AI system has a _____ component that allows the system to get information from its environment.

- Planning
- **Perception (Page# 89)**
- Learning
- Execution

A function by which we can tell which board position is nearer to our goal is called
Select correct option:

- Alternative function
- Recursive function
- Best function
- **Fitness function (Page# 83)**

Semantic networks are graphs, with nodes representing _____ and arcs representing _____ between objects.

- distance, relationships
- objects, distance
- relationships, distance
- **objects, relationships (Page# 97)**

In the worst case of semantic network, we may need to traverse the entire network and then discover that the requested info _____.

- **Does not exist (Page# 97)**
- Exists
- Is incorrect
- Is correct

A statement in conjunctive normal form (CNF) consists of _____

- **ANDs of Ors. (Page# 107)**
- ANDs
- Ors
- Ors of ANDs

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- **Representation (Page# 89)**

- Execution
- Learning
- Planning

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What is the correct order for solving a problem using GA I. Choose the best individuals from the population for crossover II. Choose initial population III. Evaluate the fitness of each individual

- I,II,III
- I,III,II
- II,I,III
- **II,III,I (Page# 84)**

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_____ is the process of driving Logical conclusion from given facts.

- Representation
- Execution
- **Reasoning (Page# 102)**
- Planning

Identify the correct step use to start design of an expert system

- **Feasibility Study (Page# 129)**
- Problem Reorganization

- Scope Study
- Rapid Prototyping

Inductive learning is based on the knowledge that is something happens a lot it is likely to be generally_____

- **True (Page# 102)**
- False
- Ambiguous
- None of the given

A rule which taken a set of inputs and gives advice as a result is called.

- Recommendation Rule
- **Directive Rule (Page# 96)**
- Relation Rule
- None of the Given

Corporation, as a computer configuration assistant.

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“The branch of computer science that is concerned with the automation of intelligent behavior” this definition is from:

- **Luger and Stubblefield (Page# 08)**
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- Schalkoff
- Bellman

IF A THEN B This can be considered to have a similar logical meaning as the following.

- **A->B** According to logical rules
- $A \leftrightarrow B$
- $A \leftarrow B$
- None of the given

A may have more than one _____ which usually suggest that there are multiple action to be taken.

- **Antecedent** (page# 95)
- Consequent

Identify the correct statement to list facts number 1 through 10.

- **Clips>(Facts1 10)** (Page# 134)
- Clips>(facts1 to 10)
- Clips>(Facts10)
- Clips>(facts1)

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- **Directive Rule** (Page# 96)
- Relation Rule
- None of the Given

In the Statement “IF A THEN B” B is called.

- Antecedent
- **Consequent** (Page# 152)

_____ usually takes the form of an action or a conclusion.

- **Antecedent** (Page# 95)
- Consequent

Expert system is an application in what area of artificial intelligence.

- **Cognitive Science** (Page# 08)
- Computer Science

Within an expert system the _____ contains facts about a specific subject area and rules that express the reasoning procedures of an expert of the subject.

- Inference Engine
- Knowledge Engineer
- **Knowledge Base** (page# 90)
- None of the given option
-

Progressive deepening guarantees to find the solution at a minimum depth like

- **DFS** (Page# 32)

- BFS
- None

An AI system has a _____ component that allows the system to get information from its environment.

- Planning
- **Perception (Page# 89)**
- Learning
- Execution

If name is “Bob” AND weather is cold THEN tells Bob “wear a cot” The above rule is an example of.

- Recommendation Rule
- **Directive Rule (Page# 96)**
- Relation Rule
- None of the given Option

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An expert system is different from conventional programs in the sense that program control and knowledge are _____.

- **Separate (Page# 121)**
- Defined
- Together
- Common

Which one of the following is involved in an ES development project:

- The domain expert
- The knowledge engineer
- The end user
- **All of the given (Page# 122)**

Semantic networks are computationally expensive at _____

- **Run time (Page# 97)**
- Compile Time
- Start Time
- End Time

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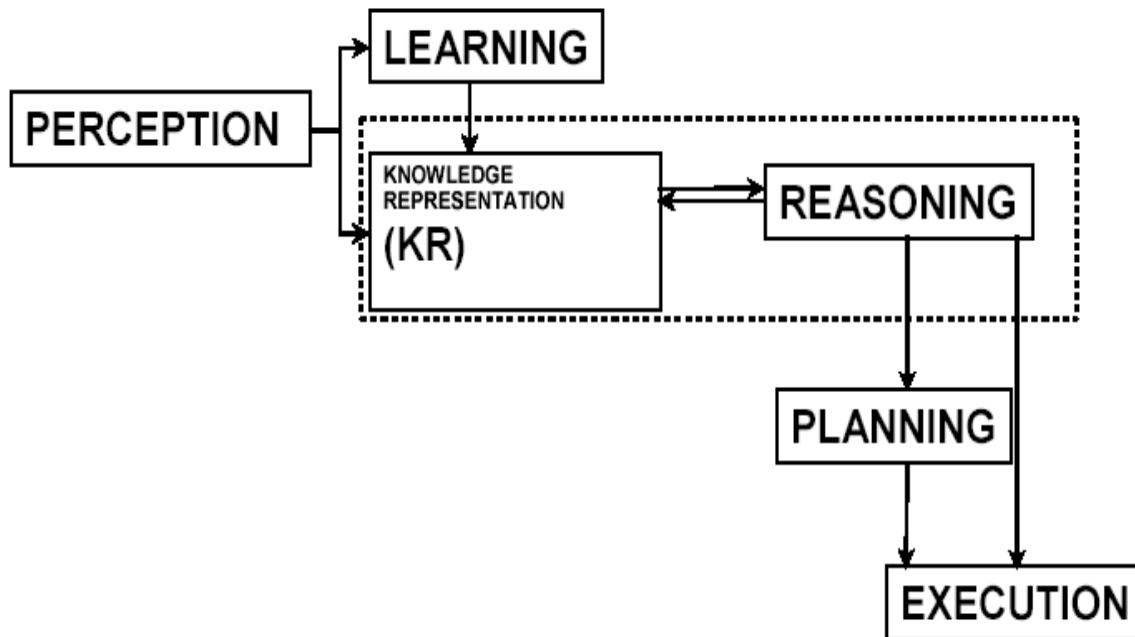
- **DFS (Page# 32)**
- BFS

- None

In Adversarial search the goals of the adversaries are usually _____ to each other

- **Contrary (Page# 62)**
- Same
- None

Which Cycle does the following figure show?



- **AI Cycle (Page# 89)**
- Design Cycle
- SDLC
- None

To infer new information from semantic networks, we can ask questions from nodes.

- **True (Page# 97)**
- False

Which one is not the application area of expert system?

- Diagnosis
- Prescription
- Interpretation
- **None (Page# 111)**

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Intelligence is the ability to

- Think / learn/Plan/ Schedule
- Recognize / Remember
- Problem Solving
- **All of the Above (Page# 1 to 6)**

In optimal path searches we try to find the _____ solution

- Least
- Worst
- Least but not worst
- **Best (Page# 24)**

Hit and trial is a classical approach to solve the _____ problems easily.

- **Trivial (Page# 15)**
- Medium

Most of the solution spaces for problems can be represented in a _____

- **Graph (Page # 21)**

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- Demo

By getting grips on _____ that deal with searching techniques in graphs and trees, problem solving can be performed in an efficient manner.

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