



**(Objective-CS607 Artificial Intelligence)**  
**(From Final Term Papers “No repeated Questions”) June 2014**

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Which one is NOT the feature of Robot?

- ▶ Reasoning, dealing with uncertainty
- ▶ Vision, learning
- ▶ Autonomy, physical Intelligence
- ▶ **None(Page 204)**

Robotics has active contributions from \_\_\_\_\_

- ▶ Biology
- ▶ Psychology
- ▶ Mathematics
- ▶ **All of the given (Page 204)**

In ANNs, MSE is known as

- ▶ Most squared error
- ▶ **Mean squared error (Page 189)**
- ▶ Medium squared error
- ▶ None of the given

Which one is the advantage of Neural Network.

- ▶ **Good for generalization (Page 187)**
- ▶ The power of ANNs lie in their parallel architecture
- ▶ Less defined rules to build a natural network
- ▶ Knowledge implicit

The soma and the enclosed nucleus in neuron play a significant role in the processing of incoming and outgoing data.

- ▶ True
- ▶ **False (Page 181)**

The Entropy is 1 when the collection contains number of positive examples \_\_\_\_\_ to/than negative examples.

- ▶ **Equal (Page 177)**
- ▶ Greater
- ▶ Less
- ▶ None of the given

In all calculations involving Entropy we define \_\_\_\_\_ to be \_\_\_\_\_



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▶ **0 log 0, 0** (Page 177)

- ▶ 0 log 10, 1
- ▶ 0 log 0, 1
- ▶ 1 log 1, 1

If the true output of a concept  $[c(x_i)]$  is 1 or 0 for an instance, then the output by our hypothesis  $[h(x_i)]$  is 1 or 0 as well, respectively.

▶ **True** (Page 177)

- ▶ False

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

▶ **True** (Page 160)

- ▶ False
- ▶ Ambiguous
- ▶ None of the given

Machine learning typically follows \_\_\_\_\_ phases according to Finlay.

- ▶ 2
- ▶ **3** (Page 160)
- ▶ 4
- ▶ 5

Which statement about learning is true:

- ▶ Learning is constructing or modifying representations of what is being experienced
- ▶ Learning denotes changes in a system that enables a system to do the same task more efficiently the next time.
- ▶ Learning is making useful changes in our minds.
- ▶ **All of the given** (Page 159)

The most popular defuzzification method is the centroid calculation.

▶ **True** (Page 158)

- ▶ False

\_\_\_\_\_ is the process by which the fuzzy sets that represent the outputs of each rule are combined into a single fuzzy set.



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▶ **Aggregation (Page 157)**

- ▶ Fuzzification
- ▶ Implication
- ▶ None of the given

If there are multiple parts to the antecedent, apply fuzzy logic \_\_\_\_\_ and resolve the antecedent to a single number between 0 and 1.

▶ **Operators (Page 153)**

- ▶ Rules
- ▶ Conditions
- ▶ None of the given

Usually a \_\_\_\_\_ graph is chosen to represent a fuzzy set.

▶ **Triangular (Page 151)**

- ▶ Circular
- ▶ Conical
- ▶ None of the given

Reasoning in fuzzy logic is just a matter of generalizing the familiar \_\_\_\_\_ logic.

▶ **Boolean (Page 147)**

- ▶ Complex
- ▶ Coognitive
- ▶ Supervised

\_\_\_\_\_ is a subfield of \_\_\_\_\_.

▶ **Computer vision, Artificial Intelligence (Page 203)**

- ▶ Robotics, Artificial Intelligence
- ▶ Soft computing, Artificial Intelligence
- ▶ None of these

Each neuron in the hidden layer is responsible for a different \_\_\_\_\_.

▶ **Line (Page 186)**

- ▶ Layer
- ▶ Phase
- ▶ None of these

\_\_\_\_\_ is the process of formulating the mapping from a given input to an output using Fuzzy logic.



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- ▶ **FIS (Page 153)**
- ▶ PIS
- ▶ Fuzzy logic
- ▶ None of these

Fuzzy logic is a superset of \_\_\_\_\_ logic.

- ▶ **conventional (Page 147)**
- ▶ positive
- ▶ negative
- ▶ None of these

It was Aristotle who came up with the ‘Law of the Excluded Middle’.

- ▶ **True (Page 145)**
- ▶ False

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

- ▶ **True (Page 79)**
- ▶ False

\_\_\_\_\_ reasoning is based on forming, or inducing a „generalization“ from a limited set of observations.

- ▶ Deductive
- ▶ Abductive
- ▶ Analogical
- ▶ **Inductive (Page 102)**

\_\_\_\_\_ is the process of deriving logical conclusions from given facts.

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

Identify the correct step used to start design of an expert system.

- ▶ **Feasibility study (Page 129)**
- ▶ Problem reorganization
- ▶ Scope study
- ▶ Rapid prototyping



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Any statement can be fuzzy

- ▶ True (Page 147)
- ▶ False

If the antecedent is only partially true, then the output fuzzy set is truncated according to the \_\_\_\_\_ method

- ▶ Intrinsic
- ▶ Implication (Page 153)
- ▶ Boolean
- ▶ None of the given

Choose the fields in which Fuzzy inference systems have been successfully applied:

- ▶ automatic control
- ▶ data classification
- ▶ decision analysis
- ▶ All of the given (Page 153)

Fuzzy logic is actually a superset of conventional Boolean logic

- ▶ TRUE (Page 150)
- ▶ FALSE

A classical set is a container, which wholly includes or wholly excludes any given element.

- ▶ TRUE (Page 145)
- ▶ FALSE

The degree of truth that we have been talking about is specifically driven out by a function called the \_\_\_\_\_ function.

- ▶ Membership (Page 149)
- ▶ Ordinary
- ▶ Fuzzy
- ▶ Inline

The tractable problems are further divided into structured and \_\_\_\_\_ problems

- ▶ Non-structured
- ▶ Complex (Page 166)
- ▶ Simple
- ▶ None of the given



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A single Perceptron simply draws a line, which is a hyper plane when the data is \_\_\_\_\_ than 2 dimensional.

Select correct option:

[More \(Page 184\)](#)

Less

Equal

None of the given

Expert system can be expressed as:

- i. It provides tools for the management, delivery, tracking, and assessment of various types of employee learning and training The set of business processes, culture, and behavior required to obtain value from investments in information systems
- ii. Used for finding the optimal solution for a specific problem by examining a very large number or possible solutions for that problem
- iii. **Intelligent technique for capturing tacit knowledge in a very specific and limited domain of human expertise, this knowledge is converted to rules that can be used throughout the entire organization**

Clips command for adding two numbers 3 and 4 is.

- i. **CLIPS> (+ 3 4) (Page 133)**
- ii. CLIPS> (3 4 +)

Reasoning in forward chaining is known as:

**Data-driven reasoning (Page 123)**

Rule-driven reasoning

Intelligence-driven reasoning

Goal-driven reasoning

Sequence wise main phases of Linear model used in developing expert systems are given below.

Planning, Know ledge acquisition and analysis , System evaluation

**Planning, Know ledge acquisition and analysis , .Know ledge design (Page 129)**



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**Identify the step involved in planning phase.**

1. Knowledge acquisition from expert
2. Coding
3. **Resource allocation (Page 129)**
4. Identify concrete knowledge element

**Identify the correct definition of linear model given below.**

1. **A linear sequence of steps is applied repeatedly in an iterative fashion to develop the software models. (Page 129)**
2. Non sequential sequence of steps is applied repeatedly in an iterative fashion to develop the expert systems.
3. A non linear sequence of steps is applied repeatedly in an iterative fashion to develop the expert systems.

\_\_\_\_\_ is the part of the system that controls the process of deriving conclusions.

1. A knowledge base
2. A database of facts
3. **An interpreter or inference engine (Page 117)**
4. None of the given

**A rule, which takes a set of inputs and gives advice, as a result, is called**

1. Recommendation Rule
2. **Directive Rule (Page 96)**
3. Relation Rule
4. None of the given options

**IF temperature is below 0 THEN weather is cold** The above rule is used to represent \_\_\_\_\_

- ▶ Recommendations
- ▶ Directives
- ▶ **Relations (Page 96)**
- ▶ None of the given options

**Within an expert system, the \_\_\_\_\_ contains facts about a specific subject area and rules that express the reasoning procedures of an expert on the subject.**

- ▶ Inference engine
- ▶ Knowledge engineer



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▶ **Knowledge base**

- ▶ None of the given options

Using deduction to reach a conclusion from a set of antecedents is called:

**a. Forward chaining**

- b. Backward chaining

**Expert system technique where a hypothesis is given at the beginning and the inference engine proceeds to ask the user questions about selected facts until the hypothesis is either confirmed or denied**

- a. Network Knowledge

- b. Data mining

**c. Backward chaining**

- d. Forward chaining

In some cases, the rules provide more definite actions such as “move left” or “close door”, in which case the rules are being used to represent \_\_\_\_\_.

- ▶ Recommendations

▶ **Directives** (Artificial Intelligence, 3/E) [Click here for detail](#)

- ▶ Relations

- ▶ None of the given option

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

▶ **objects, relationships** (Page 97)

- ▶ relationships, distance

- ▶ objects, distance

- ▶ distance, relationships

**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)

A statement in conjunctive normal form (CNF) consists of \_\_\_\_\_

▶ **ANDs of Ors.** (Page 107)

- ▶ ANDs

- ▶ Ors

- ▶ Ors of ANDs





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In adversarial search there may occur such a scenario where two opponents also called \_\_\_\_\_ are searching for goal.

- ▶ **Adversaries (Page 62)**
- ▶ Friend
- ▶ Players
- ▶ Intruder

In GA, the random process is repeated until an individual with required \_\_\_\_\_ level is found. Select correct option:

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

A function by which we can tell which board position is nearer to our goal is called

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

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

- ▶ **True (Page 79)**
- ▶ False

In Depth First Search the node with the largest value of height will be at the \_\_\_\_\_ priority to be picked.

- ▶ Minimum
- ▶ **Maximum (Page 25)**
- ▶ Zero
- ▶ Both Minimum and maximum

A proposition is the statement of a \_\_\_\_\_.

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

A drawback of FIND-S is that, it assumes the consistency within the training set.



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▶ True (Page 173)

▶ False

Decision trees give us disjunctions of conjunctions, that is, they have the form: (A AND B) \_\_\_\_\_ (C AND D).

▶ OR (Page 176)

▶ AND

▶ XOR

▶ None of the given

Hypothesis space uses the \_\_\_\_\_ of the attributes.

▶ Conjunctions (AND) (Page 168)

▶ Disjunctions (OR)

▶ Negation (NOR)

▶ None of the given

Measure of the effectiveness of an attribute in classifying the training data is called.

▶ Information Gain (Page 177)

▶ Measure Gain

▶ Information Goal

▶ None of the given

The first step of FIND-S is to initialize h to the most specific hypothesis in \_\_\_\_\_:  $h = \langle \emptyset, \emptyset \rangle$

▶ H (Page 172)

▶ I

▶ J

▶ K

A concept is the representation of the \_\_\_\_\_ with respect to the given attributes.

▶ Solution

▶ Problem (Page 167)

▶ Knowledge

▶ None of the given

Outputs of learning are determined by the \_\_\_\_\_

▶ Application (Page 161)



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- ▶ Validation
- ▶ Training
- ▶ None of the given

The Candidate-Elimination algorithm represents the \_\_\_\_\_

- ▶ **Version space** (Page 173)
- ▶ Solution space
- ▶ Elimination space
- ▶ None of the given

Inductive learning takes examples and generalizes rather than starting with \_\_\_\_\_ knowledge.

- ▶ **Existing** (Page 162)
- ▶ Inductive
- ▶ Deductive
- ▶ None of the given

The brain is a collection of about 100 \_\_\_\_\_ interconnected neurons.

- ▶ Million
- ▶ **Billion** (Page 181)
- ▶ Trillion
- ▶ None of the given

Machine learning is a prerequisite for any mature program of artificial intelligence

- ▶ **True** (Page 160)
- ▶ False

Many machine learning systems are classifiers

- ▶ **True** (Page 161)
- ▶ False

\_\_\_\_\_ stands for interactive dichotomizer

- ▶ **ID** (Page 177)
- ▶ IDC
- ▶ Int D
- ▶ None of the given



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Crisp set is not a synonym for \_\_\_\_\_

- ▶ Fuzzy set
- ▶ Classical set

Fuzzy inference systems (FIS) are NOT associated with a number of names.

- ▶ True (Page 153)
- ▶ False

Fuzzy inference systems (FIS) have multidisciplinary nature.

- ▶ True
- ▶ False (Page 153)

\_\_\_\_\_ learning works on existing facts and knowledge and deduces new knowledge from the old.

- ▶ Deductive (Page 162)
- ▶ Inductive
- ▶ Application
- ▶ None of the given

\_\_\_\_\_ logic lets us define more realistically the true functions that define real world

- ▶ Fuzzy (Page 148)
- ▶ Classical
- ▶ Boolean
- ▶ None of the given

In theoretical computer science there are two main branches of problems:

- ▶ Tractable and intractable (Page 165)
- ▶ Intractable and induction
- ▶ Tractable and induction
- ▶ None of the given

Complex problems usually have well-defined steps

- ▶ True
- ▶ False (Page 165)



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Entropy characterizes the purity/impurity of an arbitrary collection of examples

- ▶ True (Page 177)
- ▶ False

In ANNs, Training is the heart of learning, in which finding the best \_\_\_\_\_ that covers most of the examples is the objective.

- ▶ Hypothesis (Page 189)
- ▶ Neuron
- ▶ Agent
- ▶ Operator

Which one is NOT the phase of machine learning:

- ▶ Training
- ▶ Application
- ▶ Validation
- ▶ None of the given (Page 189)

A single perception simply draws a line, which is a hyper plan when data is \_\_\_\_\_ than 2 dimensional.

- ▶ More(Page 184)
- ▶ Less
- ▶ Equal
- ▶ None of the given

The input of aggregation is the list of truncated output functions returned by the \_\_\_\_\_ process for each rule.

- ▶ truncation
- ▶ implication (Page 184)
- ▶ Aggregation
- ▶ None of the given

Identify the sets in which Member function is used.

- ▶ Crisp set
- ▶ Classical set
- ▶ Fuzzy set (Page 149)
- ▶ None of the above

Fuzzy logic is a subset of conventional (Boolean) logic

- ▶ True
- ▶ False (Page 149)



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The role of tester is often called the critic

- ▶ True (Page 160)
- ▶ False

Identify the statement which best defines fuzzy sets.

- ▶ Fuzzy sets, unlike classical sets, restrict themselves to something lying wholly in either set A or in set not-A.
- ▶ Fuzzy sets, like classical sets, restrict themselves to something lying wholly in either set A or in set A.
- ▶ **Fuzzy sets, unlike classical sets, do not restrict themselves to something lying wholly in either set A or in set not-A. (Page 146)**
- ▶ Fuzzy sets, like classical sets, do not restrict themselves to something lying wholly in either set A or in set not-A.

In Fuzzy Inputs we resolve all fuzzy statements in the antecedent to a degree of membership between 0 and \_\_\_\_\_

- ▶ **1 (Page 152)**
- ▶ 2
- ▶ 3
- ▶ 4

The Multilayer Perceptrons are the most basic artificial neural \_\_\_\_\_

- ▶ **Network (Page 186)**
- ▶ System
- ▶ Interface
- ▶ None of these

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

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

Which one is not the application area of expert system?

- ▶ Diagnosis
- ▶ Prescription
- ▶ Interpretation
- ▶ **None (Page 114)**

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



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▶ **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)

“A computer program designed to model the problem solving ability of a human expert” is known as ---

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

An expert system may replace the expert or assist the expert

- ▶ **True** (Page 113)
- ▶ False

A ----- is „A person who posses the skill and knowledge to solve a specific problem in a manner superior to others“

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

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

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



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- ▶ True [click here for detail](#)
- ▶ False

Aggregation only occurs once for each output variable, just after the fifth and final step, defuzzification.

- ▶ True
- ▶ False (Page 157, [click here for details](#) )

IF name is "Bob" AND weather is cold THEN tell Bob "Wear a coat" The above rule is an example of:  
Select correct option:

1. Recommendation Rule
2. Directive Rule
3. Relation Rule
4. None of the given options

Identify correct statement for the given rule. IF the aptitude level of an undergraduate student is low and The English understanding level of undergraduate student is dull THEN He is not eligible to go abroad for higher studies.

- a. (deftemplate UnderGradStudent (slot attribute)(slot value)) (defrule StudentStatus (UnderGradStudent (attribute "aptitude level")(value "low")) (UnderGradStudent (attribute "English understanding level")(value "dull")) => (printout t "He is not eligible to go abroad for higher studies"))
- b. (deftemplate UnderGradStudent (slot attribute)(slot value)) (defrule StudentStatus (UnderGradStudent (attribute "aptitude level")(value "low")) (UnderGradStudent (attribute "English understanding level")(value "dull")) => (printout t "He is not eligible to go abroad for higher studies"))
- c. (deftemplate UnderGradStudent (slot attribute)(slot value)) (defrule StudentStatus (UnderGradStudent (attribute "aptitude level")(value "low")) (UnderGradStudent (attribute "English understanding level")(value "dull")) <=> (printout t "He is not eligible to go abroad for higher studies"))
- d. (defrule StudentStatus (UnderGradStudent (attribute "aptitude level")(value "low")) (UnderGradStudent (attribute "English understanding level")(value "dull")) => (printout t "He is not eligible to go abroad for higher studies"))

A rule may have more than one \_\_\_\_\_, which usually suggests that there are multiple actions to be taken.

1. Antecedent
2. Consequent

Identify the correct statement to list facts numbers 1 through 10

1. clips> (facts 1 10) (page 134)
2. clips> (facts 1 to 10)
3. clips> (facts 10)
4. clips> (facts 1)





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\_\_\_\_\_ usually takes the form of an action or a conclusion

1. Antecedent
2. **Consequent (page 95)**

Rule, which may have a priority in expert systems, is called

Select correct option:

1. Meta rule
2. **Conflict resolution rule**
3. Forward chain rule
4. None of the given options

Which one is NOT the advantage of Neural Network

1. Excellent for pattern recognition
2. Excellent classifiers
3. Handles noisy data well
4. **None of the given (page 187)**

If there are multiple part to the antecedent, apply fuzzy logic \_\_\_\_\_ and resolve the antecedent to a single number between 0 and 1.

1. **Operator (page 153)**
2. Rules
3. Condition
4. None of given

Mamdani's method was among the first \_\_\_\_\_ built using fuzzy set theory

1. **Control system (page 153)**
2. Expert system
3. Decision analysis system
4. None of given

In candidate-elimination algorithm version spaces is represented by two sets named

1. **G and S (page 173)**
2. G and F
3. And F
4. H and S

The multilayer perceptions are the most basic artificial neural. \_\_\_\_\_

1. **Network (page 186)**
2. Layers
3. Icon
4. None of given



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**A single layer perceptron can not perform pattern classification on linearly separable patterns.**

Select correct option:

True

**False (page 186)**

**Which is the advantage of the neural network?**

1. The power of ANNs lie in their parallel architecture
2. Less defined rules to build a neural network for the specific problem
3. Knowledge is implicit
4. **None of given (page 187)**

**\_\_\_\_\_ is the process by which the fuzzy sets that represents the outputs of each rule are combined into a single fuzzy set.**

1. **Aggregation (page 157)**
2. Fuzzification
3. Implication
4. None of the given

**Identify the sets in which Membership Function is used.**

1. Crisp set
2. Classical set
3. **Fuzzy set (page 149)**
4. None of the above

**General stages of ESDLC include.**

1. Spiral model
2. Linear model
3. **Beta system (tested by users) (page 129)**
4. Design coding

**Identify the statement which best defines the fuzzy sets.**

1. Fuzzy sets, unlike classical sets, restrict themselves to something lying wholly in either set A or in set not-A.
2. Fuzzy sets, like classical sets, restrict themselves to something lying wholly in either set A or in set not-A.
3. Fuzzy sets, unlike classical sets, do not restrict themselves to something lying wholly in either set A or in set A.
4. **Fuzzy sets, unlike classical sets, do not restrict themselves to something lying wholly in either set A or in set not-A. (page 146)**

**Identify which statement defines classical sets in a best way**

1. A classical set is a container, which wholly includes but not wholly excludes any given element.



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2. A classical set is a container, which does not wholly includes or wholly excludes any given element
3. A classical set is a container, which sometimes wholly includes or wholly excludes any given element.
4. **A classical set is a container, which wholly includes or wholly excludes any given element. (page 145)**

**Identify the correct step used to start design of an expert system.**

1. **Feasibility study (page 129)**

2. Problem recognition

3. Scope study

4. Rapid prototyping

**A drawback of FIND-S is that, it assumes the consistency within the training set.**

1. **True (page 173)**

2. False

Machine learning typically follows \_\_\_\_\_ phases according to Finlay.

1. Two

2. **Three (page 160)**

3. Four

4. Five.

**In theoretical computer science there are two main branches of problem.**

1. **Tractable and Intractable (page 165)**

2. Intractable and induction

3. Tractable and induction

4. None of given

**In Anns. MSE is known as**

1. Most squared Error

2. **Mean squared error (page 189)**

3. Medium squared error

4. None of given

**Which statement about learning is NOT true:**

1. Learning is constructing or modifying representations of what is being experienced

2. Learning denotes changes in a system that enables a system to do the same task more efficiently the next time

3. Learning is making useful changes in our minds.

4. **None of the given (page 159)**

**General stages of ESDLC includes.**

1. Spiral model

2. Linear model

3. **Beta system (tested by users) (page 129)**

4. Design coding



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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

1. I,II,III
2. I,III,II
3. II,I,III
4. II,III,I (page 84)

Artificial Neural Networks is a new learning paradigm which takes its roots from \_\_\_\_\_ inspired approach to learning.

- Chemistry
- Physics
- Biology (page 181)
- Mathematics

The input of the aggregation process is the list of truncated output functions returned by the \_\_\_\_\_ process for each rule.

- Truncation
- Implication (page 157)
- Aggregation
- None of the given

The goal of knowledge analysis is to analyze and structure the knowledge gained during the planning phase.

1. True
2. False (page 131)

That is own thoughts as they go by.

1. Introspection (page 8)
2. Psychological expressions
3. Introspection and psychological expression
4. None of the given

All managers of a company, no matter what level, have the same type of information needs.

1. True
2. False

A single layer perception cannot perform pattern classification on linearly separable patterns.

- True
- False (page 186)

The goal of knowledge analysis is to analyze and structure the knowledge gained during the planning phase.



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TRUE

**FALSE (page 131)**

Identify that for which purpose statement given below is used (deftemplate Person (slot name (type STRING)) (slot age(type NUMBER)) )

**Attribute of a fact**

Rule

Rule definition

CLIPS

**Output of learning problem in which phase.**

- a) Training:
- b) Validation
- c) Application
- d) None of the given**

**Interactive Dichotomizer uses a special function \_\_\_\_\_, to evaluate the gain information of each attribute.**

**GAIN (page 177)**

GET

FIND

EVAL

**Earlier expert system was known as**

- a) Agent
- b) Theorem

**FIND-S** finds the maximally specific hypothesis possible within the version space.  
Learning problem is primarily composed of **three** things.

Deductive learning working on **existing** facts and knowledge.

In Unsupervised search Given a set of examples with no labeling, group them into sets called **clusters**.

**Soft-computing** is naturally applied in machine learning applications.

Genetic algorithms have been employed in finding the optimal **initial** weights of neural networks.  
Fact list using command.



**(Objective-CS607 Artificial Intelligence)**  
**(From Final Term Papers “No repeated Questions”) June 2014**

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Clips , anything after a semicolon is a **comment**.

Inference networks encode the knowledge of rules and **strategies**.

Fuzzy sets, unlike **classical sets**, do not restrict themselves to something lying wholly in either set A or in set not-A.

The degree of truth that we have been talking about, is specifically driven out by a function called the **membership** function.

The Candidate-Elimination algorithm represents the version space by storing only its most general members (denoted by G) and its most specific members (denoted by S). Given only these two sets **S** and **G**,

Drawback of FIND-S, that, it assumes the consistency within the **training** set.

A linear sequence of steps is applied repeatedly in an **iterative** fashion to develop the ES.

**Predicate logic** and the classical and successful expert systems were limited in that they could only deal with perfect Boolean logic alone.

**Computer vision** extracts useful information from static pictures and sequence of images.

A **planning** system can avoid any action that is just not possible at a particular state.