Artificial Intelligence Solved MCQ-Part 2

MCQs

Multiple Choice Questions

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Commutativity Property of Classical set is

○ AUB=BUA A^B=B^A

○ AU(BUC)=(AUB)UC A^(B^C)=(A^B)^C

○ AU(B^C)=(AUB)^(AUC) A^(BUC)=(A^B)U(A^C)

○ AUA=A A^A=A

_____
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A problem is first connected to its proposed solution during the _____ stage

○ conceptualization

○ identification

○ formalization

○ implementation

_____
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_____ refers to the discrepancy among a computed, observed or measured value and the true specified or theoretically correct values.

○ Fault

○ Failure

○ Defect

○ Error

_____
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What are the advantages of neural networks over conventional computers?
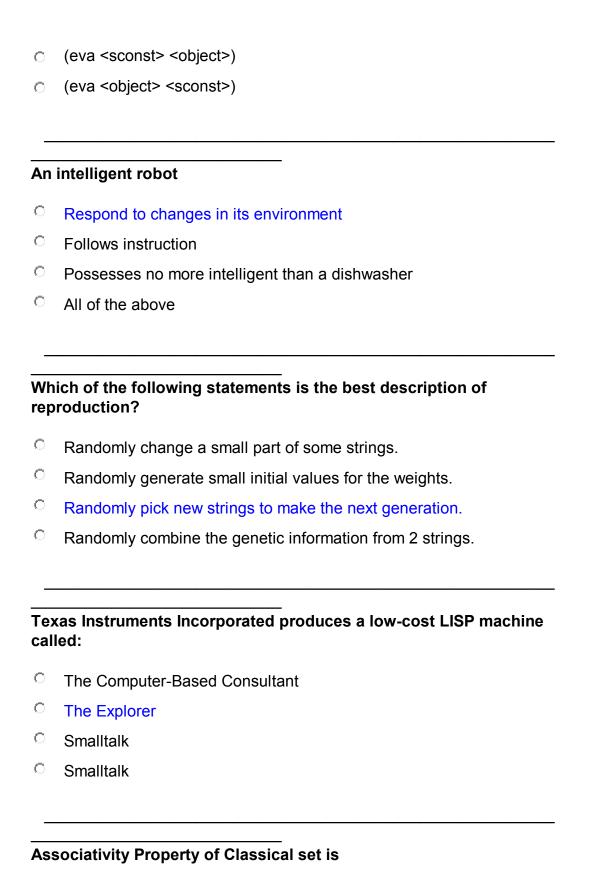**(i) They have the ability to learn by example**
(ii) They are more fault tolerant

(iii)They are more suited for real time operation due to their high computational rates

    ○   (i) and (ii) are true

    ○   (i) and (iii) are true

    ○   all of them are true

    ○   None of Above

_____
_____

**A 4-input neuron has weights 1, 2, 3 and 4. The transfer function is linear with the constant of
proportionality being equal to 2. The inputs are 4, 10, 5 and 20 respectively. The output will be:**

    ○   238

    ○   76

    ○   119

    ○   all of the above

_____
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Graphic interfaces were first used in a Xerox product called:

    ○   InterLISP

    ○   Ethernet

    ○   Smalltalk

    ○   ZetaLISP

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Ranking is a technique used for

    ○   deleting undesirable members of the population.

○ obtaining the selection probabilities for reproduction.

○ copying the fittest member of each population into the mating pool.

○ preventing too many similar individuals from surviving to the next generation.

_____

_____
Which approach to speech recognition avoids the problem caused by the variation in speech patterns among different speakers?

○ Continuous speech recognition

○ Isolated word recognition

○ Connected word recognition

○ Speaker-dependent recognition

_____

_____
In a rule based system,procedural domain knowledge is in the form of

○ Production rules

○ Rule interpreters

○ Control rules

○ Meta rules

_____

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DEC advertises that it helped to create the world first expert system routinely used in an industrial environment called XCON or

○ PDP-11

○ RI

○ VAX

○ MAGNOM

_____

_____

Which of the following algorithms can be used to train a single-layer feedforward network?

○ Hard competitive learning.

○ All of the above answers.

○ A genetic algorithm

○ Soft competitive learning

_____
_____

○ A

○ B

○ C

○ D

_____
_____

Which of the following is being investigated as a means of automating the creation of a knowledge base?

○ automatic knowledge acquisition

○ simpler tools

○ discovery of new concepts

○ All of the above

_____
_____

The component of an ICAI (Intelligent Computer-Asslsted Instruction) presenting information to the student is the:

○ student model

○ problem-solving expertise

○ tutoring module

○ All of the above

_____

_____

The Blocks World Problem in Artificial Intelligence is normally discussed to explain a _____

○ Search technique

○ Planning system

○ Constraint satisfaction system

○ Knowledge base system

_____

_____

A KES knowledge base contains information in the form of:

○ associations

○ actions

○ free text

○ All of the above

_____

_____

The original LISP machines produced by both LMI and Symbolics were based on research performed at

○ CMU

○ MIT

○ Stanford University

○ RAMD

_____

_____

In LISP, the function evaluates <object> and assigns this value to the unevaluated <sconst>.

○ (constant <sconst> <object>)

○ (defconstant <sconst> <object>)

○ (eva <sconst> <object>)

○ (eva <object> <sconst>)

_____

_____

An intelligent robot

○ Respond to changes in its environment

○ Follows instruction

○ Possesses no more intelligent than a dishwasher

○ All of the above

_____

_____

Which of the following statements is the best description of reproduction?

○ Randomly change a small part of some strings.

○ Randomly generate small initial values for the weights.

○ Randomly pick new strings to make the next generation.

○ Randomly combine the genetic information from 2 strings.

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Texas Instruments Incorporated produces a low-cost LISP machine called:

○ The Computer-Based Consultant

○ The Explorer

○ Smalltalk

○ Smalltalk

_____

_____

Associativity Property of Classical set is

- AUB=BUA A^B=B^A
- AU(BUC)=(AUB)UC A^(B^C)=(A^B)^C
- AU(B^C)=(AUB)^(AUC) A^(BUC)=(A^B)U(A^C)
- AUA=A A^A=A

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The field that investigates the mechanics of human intelligence is

- history
- cognitive science
- psychology
- sociology

_____

_____

or speech understanding systems to gain widespread acceptance in office automation, they must feature

- speaker independence
- speaker dependence
- isolated word recognition
- All of the above

_____

_____

In Fuzzy set the membership function generally in ranges

- 0-100
- 100-1000
- 1-100
- 0-1

_____

_____

In Classical sets Difference Operation represented as

○ AUB={x|xEA or xEB}

○ A^B={x|xEA and xEB}

○ ~A={x|x!EA and xEX}

○ A|B={x|xEA and xEB}=A^~B

_____
_____

Which of the following neural networks uses supervised learning?

○ Simple recurrent network

○ Self-organizing feature map.

○ Hopfield network.

○ All of the above answers

_____
_____

The hardware features of LISP machines generally include

○ large memory and a high-speed processor

○ letter-quality printers and 8-inch disk drives

○ a mouse and a specialized keyboard

○ both (a) and (c)

_____
_____

A neuron with 4 inputs has the weight vector w = [1, 2, 3, 4]T and a bias _ = 0 (zero). The
activation function is linear, where the constant of proportionality equals 2 — that is, the
activation function is given by f(net) = 2 × net. If the input vector is x = [4, 8, 5, 6]T then the output
of the neuron will be

○ 118.

○ 112

○ 58

○ 11

_____

In Classical sets Intersection Operation represented as

○ AUB={x|xEA or xEB}

○ A^B={x|xEA and xEB}

○ ~A={x|x!EA and xEX}

○ A|B={x|xEA and xEB}=A^~B

_____

Elementary linguistic units which are smaller than words are

○ allophones

○ phonemes

○ syllables

○ All of the above

_____

Special programs that assist programmers are called

○ heuristic processors

○ symbolic programmers

○ intelligent programming tools

○ program recognizers

_____

A computer vision technique that relies on image templates is

○ edge detection

- binocular vision
- model-based vision
- robot vision

_____

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If an artificial variable is present in the basic variable of optimal simplex table then the solution is _____

- Alternative solution
- Infeasible solution
- Unbounded solution
- Degenerate solution

_____

_____

The characteristics of the computer system capable of thinking, reasoning and learning is known is

- machine intelligence
- human intelligence
- artificial intelligence
- virtual intelligence

_____

_____

LISP was created by:

- John McCarthy
- Marvin Minsky
- Alan Turing
- Allen Newell and Herbert Simon

_____

_____

Input segments of AI programming contain(s)

○ sound

○ smell

○ touch

○ All of the above

_____

_____

Which of the following function returns t If the object is a symbol m LISP?

○ (* <object>)

○ (symbolp <object>)

○ (nonnumeric <object>)

○ (constantp <object>)

_____

_____

If a robot can alter its own trajectory in response to external conditions, it is considered to be

○ intelligent

○ mobile

○ open loop

○ non-servo

_____

_____

_____ is the science that attempts to produce machines that display the same type of intelligence that humans do.

○ Nanoscience

○ Nanotechnology

○ Simulation

○ Artificial intelligence

_____

_____

Which approach to speech recognition avoids the problem caused by the differences in the way words are pronounced according to context?

○   continuous speech recognition

○   connected word recognition

○   isolated word recognition

○   speaker-dependent recognition

_____

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Which of the following types of learning can used for training artificial neural networks?

○   Unsupervised learning.

○   Reinforcement learning

○   All of the above answers

○   None of the above answers.

_____

_____

One definition of AI focuses on problem-solving methods that process:

○   smell

○   symbols

○   touch

○

_____

_____

Output segments of AI programming contain(s)

○   printed language and synthesized speech

○ Manipulation of physical object

  ○ Locomotion

  ○ All of the above

_____

In LISP, the function (endp <list>)

  ○ returns a new list that is equal to <list> by copying the top-level element of <list>

  ○ returns the length of <list>

  ○ returns t if <list> is empty.

  ○ All of the above

_____

A series of AI systems developed by Pat Langley to explore the role of heuristics in scientific discovery.

  ○ RAMD

  ○ BACON

  ○ MIT

  ○ DU

_____

The finding of a path start state to a goal state is known as

  ○ Search

  ○ Classification

  ○ Simulation

  ○ None of these

_____

The intelligent agents sense through_____ and take actions

through

- ○ Sensors,actuators
- ○ Remote,signals
- ○ Both a and b
- ○ None of these

_____

_____

- ○ Depth first search
- ○ Best first search
- ○ Minimax search
- ○ Breadth first search

_____

_____

Idem Potency Property of Classical set is

- ○ AUB=BUA A^B=B^A
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- ○ AUA=A A^A=A