

ARTIFICIAL INTELLIGENCE MCQs

1 What is Artificial intelligence?

- A. Putting your intelligence into Computer
- B. Programming with your own intelligence
- C. Making a Machine intelligent
- D. Playing a Game

ANSWER: C

2 Strong Artificial Intelligence is

- A. the embodiment of human intellectual capabilities within a computer
- B. a set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans
- C. the study of mental faculties through the use of mental models implemented on a computer
- D. all of the mentioned

ANSWER: A

3 In which of the following situations might a blind search be acceptable?

- A. real-life situation
- B. complex game
- C. small search space
- D. all of the mentioned

ANSWER: C

4 Which search method takes less memory?

- A. Depth-First Search
- B. Breadth-First search
- C. Optimal search
- D. Linear Search

ANSWER: A

5 A heuristic is a way of trying

- A. To discover something or an idea embedded in a program
- B. To search and measure how far a node in a search tree seems to be from a goal
- C. To compare two nodes in a search tree to see if one is better than the other is
- D. All of the mentioned

ANSWER: D

6 Which is not a property of representation of knowledge?

- A. Representational Verification**
- B. Representational Adequacy**
- C. Inferential Adequacy**
- D. Inferential Efficiency**

ANSWER: A

7 A.M. turing developed a technique for determining whether a computer could or could not demonstrate the artificial Intelligence, Presently, this technique is called

- A. Turing Test**
- B. Algorithm**
- C. Boolean Algebra**
- D. Logarithm**

ANSWER: A

8 A Personal Consultant knowledge base contain information in the form of

- A. parameters**
- B. contexts**
- C. production rules**
- D. all of the mentioned**

ANSWER: D

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

- A. Continuous speech recognition**
- B. Isolated word recognition**
- C. Connected word recognition**
- D. Speaker-dependent recognition**

ANSWER: D

10 Which of the following, is a component of an expert system?

- A. inference engine**
- B. knowledge base**
- C. user interface**
- D. all of the mentioned**

ANSWER: D

11 A computer vision technique that relies on image templates is

- A. edge detection**
- B. binocular vision**

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- C. model-based vision
- D. robot vision

ANSWER: C

12 DARPA, the agency that has funded a great deal of American Artificial Intelligence research, is part of the Department of

- A. Defense
- B. Energy
- C. Education
- D. Justice

ANSWER: A

13 Which of these schools was not among the early leaders in Artificial Intelligence research?

- A. Dartmouth University
- B. Harvard University
- C. Massachusetts Institute of Technology
- D. Stanford University

ANSWER: B

14 Who is the “father” of artificial intelligence?

- A. Fisher Ada
- B. John McCarthy
- C. Allen Newell
- D. Alan Turning

ANSWER: B

15 A process that is repeated, evaluated, and refined is called

- A. diagnostic
- B. descriptive
- C. interpretive
- D. iterative ANSWER: D

16 Visual clues that are helpful in computer vision include

- A. color and motion
- B. depth and texture
- C. height and weight
- D. color and motion, depth and texture

ANSWER: D

17 General games involves

- A. Single-agent
- B. Multi-agent
- C. Neither Single-agent nor Multi-agent
- D. Only Single-agent and Multi-agent

ANSWER: D

18 Adversarial search problems uses

- A. Competitive Environment
- B. Cooperative Environment
- C. Neither Competitive nor Cooperative Environment
- D. Only Competitive and Cooperative Environment

ANSWER: A

19 Zero sum game has to be a game.

- A. Single player
- B. Two player
- C. Multiplayer
- D. Three player

ANSWER: C

20 A game can be formally defined as a kind of search problem with the following components.

- A. Initial State
- B. Successor Function
- C. Terminal Test
- D. All of the mentioned

ANSWER: D

21 The initial state and the legal moves for each side define the for the game.

- A. Search Tree
- B. Game Tree
- C. State Space Search
- D. Forest

ANSWER: B

22 General algorithm applied on game tree for making decision of win/lose is

- A. DFS/BFS Search Algorithms
- B. Heuristic Search Algorithms
- C. Greedy Search Algorithms
- D. MIN/MAX Algorithms

ANSWER: D

23 What is the complexity of minimax algorithm?

- A. Same as of DES
- B. Space — bm and time — bm
- C. Time — bm and space — bm
- D. Same as BFS

ANSWER: A

24 Which is the most straightforward approach for planning algorithm?

- A. Best-first search
- B. State-space search
- C. Depth-first search
- D. Hill-climbing search

ANSWER: B

25 What are taken into account of state-space search?

- A. Postconditions
- B. Preconditions
- C. Effects
- D. Both Preconditions & Effects

ANSWER: D

26 How many ways are available to solve the state-space search?

- A. 1
- B. 2
- C. 3
- D. 4

ANSWER: B

27 What is the other name for forward state-space search?

- A. Progression planning
- B. Regression planning
- C. Test planning
- D. None of the mentioned

ANSWER: A

28 How many states are available in state-space search?

- A. 1
- B. 2
- C. 3
- D. 4

ANSWER: D

29 What is the main advantage of backward state-space search?

- A. Cost**
- B. Actions**
- C. Relevant actions**
- D. All of the mentioned**

ANSWER: C

30 What is the other name of the backward state-space search?

- A. Regression planning**
- B. Progression planning**
- C. State planning**
- D. Test planning**

ANSWER: A

31 What is meant by consistent in state-space search?

- A. Change in the desired literals**
- B. Not any change in the literals**
- C. No change in goal state**
- D. None of the mentioned**

ANSWER: B

32 What will happen if a predecessor description is generated that is satisfied by the initial state of the planning problem?

- A. Success**
- B. Error**
- C. Compilation**
- D. Termination**

ANSWER: 0

33 Which approach is to pretend that a pure divide and conquer algorithm will work?

- A. Goal independence**
- B. Subgoal independence**
- C. Both Goal & Subgoal independence**
- D. None of the mentioned**

ANSWER: B

34 Which search is equal to minimax search but eliminates the branches that can't influence the final decision?

- A. Depth-first search
- B. Breadth-first search
- C. Alpha-beta pruning
- D. None of the mentioned

ANSWER: C

35 Which values are independent in minimax search algorithm?

- A. Pruned leaves x and y
- B. Every states are dependant
- C. Root is independent
- D. None of the mentioned

ANSWER: A

36 To which depth does the alpha-beta pruning can be applied?

- A. 10 states
- B. 8 States
- C. 6 States
- D. Any depth

ANSWER: D

37 Which search is similar to minimax search?

- A. Hill-climbing search
- B. Depth-first search
- C. Breadth-first search
- D. All of the mentioned

ANSWER: B

38 Which value is assigned to alpha and beta in the alpha-beta pruning?

- A. Alpha = max
- B. Beta = min
- C. Beta = max
- D. Both Alpha = max & Beta = min

ANSWER: D

39 Where does the values of alpha-beta search get updated?

- A. Along the path of search
- B. Initial state itself
- C. At the end
- D. None of the mentioned

ANSWER: A

40 How the effectiveness of the alpha-beta pruning gets increased?

- A. Depends on the nodes**
- B. Depends on the order in which they are executed**
- C. All of the mentioned**
- D. None of the mentioned**

ANSWER: A

41 What is called as transposition table?

- A. Hash table of next seen positions**
- B. Hash table of previously seen positions**
- C. Next value in the search**
- D. None of the mentioned**

ANSWER: B

42 Which is identical to the closed list in Graph search?

- A. Hill climbing search algorithm**
- B. Depth-first search**
- C. Transposition table**
- D. None of the mentioned**

ANSWER: C

43 Which function is used to calculate the feasibility of whole game tree?

- A. Evaluation function**
- B. Transposition**
- C. Alpha-beta pruning**
- D. All of the mentioned**

ANSWER: A

44 Knowledge and reasoning also play a crucial role in dealing with environment.

- A. Completely Observable**
- B. Partially Observable**
- C. Neither Completely nor Partially Observable**
- D. Only Completely and Partially Observable**

ANSWER: B

45 Treatment chosen by doctor for a patient for a disease is based on

- A. Only current symptoms**
- B. Current symptoms plus some knowledge from the textbooks**
- C. Current symptoms plus some knowledge from the textbooks plus experience**
- D. All of the mentioned**

ANSWER: C

46 Choose the correct option. A. Knowledge base (KB) consists of set of statements. B. Inference is deriving a new sentence from the KB.

- A. A is true, B is true
- B. A is false, B is false
- C. A is true, B is false
- D. A is false, B is true

ANSWER: A

47 Wumpus World is a classic problem, best example of

- A. Single player Game
- B. Two player Game
- C. Reasoning with Knowledge
- D. Knowledge based Game

ANSWER: C

48 'a \models 13' to mean that the sentence a entails the sentence 13) if and only if, in every model in which a is 13 is also

- A. True, true
- B. True, false
- C. False, true
- D. False, false

ANSWER: A

49 Which is not a property of representation of knowledge?

- A. Representational Verification
- B. Representational Adequacy
- C. Inferential Adequacy
- D. Inferential Efficiency

ANSWER: A

50 Which is not Familiar Connectives in First Order Logic?

- A. and
- B. iff
- C. or
- D. not

ANSWER: D

51 Inference algorithm is complete only if

- A. It can derive any sentence
- B. It can derive any sentence that is an entailed version

- C. It is truth preserving
- D. it can derive any sentence that is an entailed version & It is truth preserving

ANSWER: D

52 A constructive approach in which no commitment is made unless it is necessary to do so is

- A. Least commitment approach
- B. Most commitment approach
- C. Nonlinear planning
- D. Opportunistic planning

ANSWER: A

53 Uncertainty arises in the wumpus world because the agent's sensors give only

- A. Full & Global information
- B. Partial & Global Information
- C. Partial & local Information
- D. Full & local information

ANSWER: C

54 A Hybrid Bayesian network contains

- A. Both discrete and continuous variables
- B. Only Discrete variables
- C. Only Discontinuous variable
- D. Both Discrete and Discontinuous variable

ANSWER: A

55 How fuzzy logic different from conventional control method ?

- A. IF and THEN Approach
- B. FOR Approach
- C. WHILE Approach
- D. DO Approach

ANSWER: A

56 If a hypothesis says it should be positive, but in fact it is negative, we call it

- A. A consistent hypothesis
 - B. A false negative hypothesis
 - C. A false positive hypothesis
 - D. A specialized hypothesis
- ANSWER: C

57 Which is true for Decision theory?

- A. Decision Theory = Probability theory + utility theory
- B. Decision Theory = Inference theory + utility theory
- C. Decision Theory = Uncertainty + utility theory
- D. Decision Theory = Probability theory + preference

ANSWER: C

58 A constructive approach in which no commitment is made unless it is necessary to do so is

- A. Least commitment approach
- B. Most commitment approach
- C. Nonlinear planning
- D. Opportunistic planning

ANSWER: A

59 What is the form of Fuzzy logic?

- A. Two-valued logic
- B. Crisp set logic
- C. Many-valued logic
- D. Binary set logic

ANSWER: C

60 The truth values of traditional set theory is and that of fuzzy set is

- A. Either 0 or 1, between 0 & 1
- B. Between 0 & 1, either 0 or 1
- C. Between 0 & 1, between 0 & 1
- D. Either 0 or 1, either 0 or 1

ANSWER: A

61 The room temperature is hot. Here the hot (use of linguistic variable is used. can be represented by

- A. Fuzzy Set
- B. Crisp Set
- C. Fuzzy & Crisp Set
- D. None of the mentioned

ANSWER: A

62 The values of the set membership is represented by

- A. Discrete Set
- B. Degree of truth
- C. Probabilities
- D. Both Degree of truth & Probabilities

ANSWER: B

63 Fuzzy Set theory defines fuzzy operators. Choose the fuzzy operators from the following.

- A. AND**
- B. OR**
- C. NOT**
- D. All of the mentioned**

ANSWER: D

64 There are also other operators, more linguistic in nature, called that can be applied to fuzzy set theory.

- A. Hedges**
- B. Lingual Variable**
- C. Fuzz Variable**
- D. None of the mentioned**

ANSWER: A

65 Fuzzy logic is usually represented as

- A. IF-THEN-ELSE rules**
- B. IF-THEN rules**
- C. Both IF-THEN-ELSE rules & IF-THEN rules**
- D. None of the mentioned**

ANSWER: B

66 _____ is/are the way/s to represent uncertainty.

- A. Fuzzy Logic**
- B. Probability**
- C. Entropy**
- D. All of the mentioned**

ANSWER: D

67 _____ are algorithms that learn from their more complex environments (hence eco) to generalize, approximate and simplify solution logic.

- A. Fuzzy Relational DB**
- B. Ecorithms**
- C. Fuzzy Set**
- D. None of the mentioned**

ANSWER: C

68 How many terms are required for building a bayes model?

- A. 1
- B. 2
- C. 3
- D. 4

ANSWER: C

69 What is needed to make probabilistic systems feasible in the world?

- A. Reliability
- B. Crucial robustness
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- C. Feasibility
- D. None of the mentioned

ANSWER: B

70 Where does the bayes rule can be used?

- A. Solving queries
- B. Increasing complexity
- C. Decreasing complexity
- D. ANSWERing probabilistic query

ANSWER: D

71 What does the bayesian network provides?

- A. Complete description of the domain
- B. Partial description of the domain
- C. Complete description of the problem
- D. None of the mentioned

ANSWER: A

72 How the entries in the full joint probability distribution can be calculated?

- A. Using variables
- B. Using information
- C. Both Using variables & information
- D. None of the mentioned

ANSWER: B

73 How the bayesian network can be used to answer any query ?

- A. Full distribution
- B. Joint distribution
- C. Partial distribution
- D. All of the mentioned

ANSWER: B

74 How the compactness of the bayesian network can be described?

- A. Locally structured**
- B. Fully structured**
- C. Partial structure**
- D. All of the mentioned**

ANSWER: A

75 To which does the local structure is associated?

- A. Hybrid**
- B. Dependant**
- C. Linear**
- D. None of the mentioned**

ANSWER: C

76 Which condition is used to influence a variable directly by all the others?

- A. Partially connected**
- B. Fully connected**
- C. Local connected**
- D. None of the mentioned**

ANSWER: B

77 What is the consequence between a node and its predecessors while creating bayesian network?

- A. Functionally dependent**
- B. Dependant**
- C. Conditionally independent**
- D. Both Conditionally dependant & Dependant**

ANSWER: C

78 What is perceptron?

- A. a single layer feed-forward neural network with pre-processing**
- B. an auto-associative neural network**
- C. a double layer auto-associative neural network**
- D. a neural network that contains feedback**

ANSWER: A

79 What is an auto-associative network?

- A. a neural network that contains no loops
- B. a neural network that contains feedback
- C. a neural network that has only one loop
- D. a single layer feed-forward neural network with pre-processing

ANSWER: B

80 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. What will be the output?

- A. 238
- B. 76
- C. 119
- D. 123

ANSWER: A

81 Which of the following is true? (I) On average, neural networks have higher computational rates than conventional computers. (ii) Neural networks learn by example. (iii) Neural networks mimic the way the human brain works.

- A. All of the mentioned are true
- B. (ii) and NO are true
- C. 0), (ii) and (iii) are true
- D. None of the mentioned

ANSWER: A

82 Which of the following is true for neural networks? 0) The training time depends on the size of the network. (ii) Neural networks can be simulated on a conventional computer. (iii) Artificial neurons are identical in operation to biological ones.

- A. All of the mentioned
- B. (ii) is true
- C. (i) and (ii) are true
- D. None of the mentioned

ANSWER: C

83 What are the advantages of neural networks over conventional computers? (F) 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

- A. (i) and (ii) are true
- B. (I) and (iii) are true
- C. Only (i)
- D. All of the mentioned

ANSWER: D

84 Which of the following is true?

Single layer associative neural networks do not have the ability to:

- (i) perform pattern recognition**
- (ii) find the parity of a picture**
- (iii) determine whether two or more shapes in a picture are connected or not**

- A. (ii) and (iii) are true**
- B. (ii) is true**
- C. All of the mentioned**
- D. None of the mentioned**

ANSWER: A

85 Which is true for neural networks?

- A. it has set of nodes and connections**
- B. Each node computes it's weighted input**
- C. Node could be in excited state or non-excited state**
- D. All of the mentioned**

ANSWER: D

86 A 3-input neuron is trained to output a zero when the input is 110 and a one when the input is 111. After generalization, the output will be zero when and only when the input is?

- A. 000 or 110 or 011 or 101**
- B. 010 or 100 or 110 or 101**
- C. 000 or 010 or 110 or 100**
- D. 100 or 111 or 101 or 001**

ANSWER: C

87 Why is the XOR problem exceptionally interesting to neural network researchers?

- A. Because it can be expressed in a way that allows you to use a neural network**
- B. Because it is complex binary operation that cannot be solved using neural networks**
- C. Because it can be solved by a single layer perceptron**
- D. Because it is the simplest linearly inseparable problem that exists.**

ANSWER: D

88 What is back propagation?

- A. It is another name given to the curvy function in the perceptron**
- B. It is the transmission of error back through the network to adjust the inputs**
- C. It is the transmission of error back through the network to allow weights to be adjusted so that the network can learn**
- D. None of the mentioned**

ANSWER: C

89 Why are linearly separable problems of interest of neural network researchers?

- A. Because they are the only class of problem that network can solve successfully
- B. Because they are the only class of problem that Perceptron can solve successfully
- C. Because they are the only mathematical functions that are continue
- D. Because they are the only mathematical functions you can draw

ANSWER: B

90 Which of the following is not the promise of artificial neural network?

- A. It can explain result
- B. It can survive the failure of some nodes
- C. It has inherent parallelism
- D. It can handle noise

ANSWER: A

91 Neural Networks are complex with many parameters.

- A. Linear Functions
- B. Nonlinear Functions
- C. Discrete Functions
- D. Exponential Functions

ANSWER: A

92 A perceptron adds up all the weighted inputs it receives, and if it exceeds a certain value, it outputs a 1, otherwise it just outputs a 0.

- A. True
- B. False
- C. Sometimes — it can also output intermediate values as well
- D. Can't say

ANSWER: A

93 What is the name of the function in the following statement "A perceptron adds up all the weighted inputs it receives, and if it exceeds a certain value, it outputs a 1, otherwise it just outputs a 0"?

- A. Step function
- B. Heaviside function
- C. Logistic function
- D. Perceptron function

ANSWER: B

94 What is a Cybernetics?

- A. Study of communication between two machines
- B. Study of communication between human and machine
- C. Study of communication between two humans
- D. Study of Boolean values

ANSWER: B

95 What is the goal of artificial intelligence?

- A. To solve real-world problems
- B. To solve artificial problems
- C. To explain various sorts of intelligence
- D. To extract scientific causes

ANSWER: C

96 An algorithm is complete if

- A. It terminates with a solution when one exists
- B. It starts with a solution
- C. It does not terminate with a solution
- D. It has a loop

ANSWER: A

97 Which is true regarding BFS (Breadth First Search)?

- A. BFS will get trapped exploring a single path
- B. The entire tree so far been generated must be stored in BFS
- C. BFS is not guaranteed to find a solution if exists
- D. BFS is nothing but Binary First Search

ANSWER: B

98 What is a heuristic function?

- A. A function to solve mathematical problems
- B. A function which takes parameters of type string and returns an integer value
- C. A function whose return type is nothing
- D. A function that maps from problem state descriptions to measures of desirability

ANSWER: D

99 The traveling salesman problem involves n cities with paths connecting the cities. The time taken for traversing through all the cities, without knowing in advance the length of a minimum tour, is

- A. $O(n)$
- B. $O(n^2)$
- C. $O(n!)$
- D. $O(n/2)$

ANSWER: C

100 What is the problem space of means-end analysis?

- A. An initial state and one or more goal states**
- B. One or more initial states and one goal state**
- C. One or more initial states and one or more goal state**
- D. One initial state and one goal state**

ANSWER: A

AI MCQs

1 An expert system differs from a database program in that only an expert system:

- A Contains declarative knowledge
- B Contains procedural knowledge
- C Features the retrieval of stored information
- D Expects users to draw their own conclusions

Ans B

2 Natural language understanding is used in:

- A Natural language interfaces
- B Natural language front ends
- C Text understanding systems
- D All of the above

Ans D

3 The first ai programming language was called:

- A Basic
- B Fortran
- C Ipl
- D Lisp

Ans C

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

- A Smell
- B Symbols
- C Touch
- D Algorithms

Ans B

5 Artificial intelligence is

- A The embodiment of human intellectual capabilities within a computer.
- B A set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans.
- C The study of mental faculties through the use of mental models implemented on a computer.
- D All of the above

Ans D

6 People overcome natural language problems by:

- A Grouping attributes into frames
- B Understanding ideas in context
- C Identifying with familiar situations
- D Both (b) and (c)

Ans D

7 A series of ai systems developed by pat langley to explore the role of heuristics in scientific discovery.

- A Ramd
- B Bacon
- C Mit
- D Du

Ans B

8 A Turing developed a technique for determining whether a computer could or could not demonstrate the artificial intelligence,, presently, this technique is called

- A Turing test
- B Algorithm
- C Boolean algebra
- D Logarithm

Ans A

9 Which of the following, is a component of an expert system?

- A Inference engine
- B Knowledge base
- C User interface
- D All of the above

Ans D

10 Natural language processing can be divided into the two subfields of:

- A Context and expectations
- B Generation and understanding
- C Semantics of pragmatics
- D Recognition and synthesis

Ans B

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

- A Machine intelligence
- B Human intelligence

C Artificial intelligence
D Virtual intelligence

Ans C

12 The area of AI that investigates methods of facilitating communication between people and computers is:

A Natural language processing
B Symbolic processing
C Decision support
D Robotics

Ans A

13 The “Turing machine” showed that you could use a/an system to program any algorithmic task.

A Binary
B Electro-chemical
C Recursive
D Semantic

Ans A

14 What is the term used for describing the judgmental or commonsense part of problem solving?

A Heuristic
B Critical
C Value based
D Analytical

Ans A

15 What was originally called the “imitation game” by its creator?

A The Turing test
B Lisp
C The logic theorist
D Cybernetics

Ans A

16 Weak AI is

A The embodiment of human intellectual capabilities within a computer.
B A set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans.
C The study of mental faculties through the use of mental models implemented on a computer.
D All of the above

Ans C

17 An AI technique that allows computers to understand associations and relationships between objects and events is called:

- A Heuristic processing**
- B Cognitive science**
- C Relative symbolism**
- D Pattern matching**

Ans D

18 A natural language generation program must decide:

- A What to say**
- B When to say something**
- C Why it is being used**
- D Both (a) and (b)**

Ans D

19 Strong artificial intelligence is

- A The embodiment of human intellectual capabilities within a computer**
- B A set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans**
- C The study of mental faculties through the use of mental models implemented on a computer**
- D All of the mentioned**

Ans A

20 What is artificial intelligence?

- A Putting your intelligence into computer**
- B Programming with your own intelligence**
- C Making a machine intelligent**
- D Playing a game**

Ans C

21 A heuristic is a way of trying

- A To discover something or an idea embedded in a program**
- B To search and measure how far a node in a search tree seems to be from a goal**
- C To compare two nodes in a search tree to see if one is better than the other is**
- D All of the mentioned**

Ans D

22 Which search method takes less memory?

- A Depth-first search**
- B Breadth-first search**

C Optimal search
D Linear search

Ans A

23 How do you represent “all dogs have tails”?

A $\forall x: \text{dog}(x) \text{ has tail}(x)$
B $\forall x: \text{dog}(x) \text{ has tail}(y)$
C $\forall x: \text{dog}(y) \text{ has tail}(x)$
D $\forall x: \text{dog}(x) \text{ has tail}(x)$

Ans

24 Which is not a property of representation of knowledge?

A Representational verification
B Representational adequacy
C Inferential adequacy
D Inferential efficiency

Ans A

25 A robot’s “arm” is also known as its

A End effector
B Actuator
C Manipulator
D Servomechanism

Ans C

26 What is transposition rule?

A From $p \rightarrow q$, infer $\sim q \rightarrow p$
B From $p \rightarrow q$, infer $q \rightarrow \sim p$
C From $p \rightarrow q$, infer $q \rightarrow p$
D From $p \rightarrow q$, infer $\sim q \rightarrow \sim p$

Ans D

27 In default logic, which of the following inference rules of the form is allowed?

A $(a : b) / c$
B $A / (b : c)$
C A / b
D $A / b : c$

Ans A

28 What is another type of default reasoning?

- A Monotonic reasoning
- B Analogical reasoning
- C Bitonic reasoning
- D Non-monotonic reasoning

Ans D

29 Categorize crossword puzzle in fully observable / partially observable.

- A Fully observable
- B Partially observable
- C All of the mentioned
- D None of the mentioned

Ans A

30 An expert system differs from a database program in that only an expert system:

- A Strong artificial intelligence
- B Weak artificial intelligence
- C Applied artificial intelligence
- D All of the mentioned

Ans D

31 An artificial neural network is based on?

- A Strong artificial intelligence approach
- B Weak artificial intelligence approach
- C Cognitive artificial intelligence approach
- D Applied artificial intelligence approach

Ans C

32 The face recognition system is based on?

- A Strong artificial intelligence approach
- B Weak artificial intelligence approach
- C Cognitive artificial intelligence approach
- D Applied artificial intelligence approach

Ans D

33 Which term is used for describing the judgmental or commonsense part of problem solving?

- A Heuristic
- B Critical
- C Value based
- D Analytical

Ans A

34 Decision support programs are designed to help managers make

- A Budget projections**
- B Visual presentations**
- C Business decisions**
- D Vacation schedules**

Ans C

35 What are the two subfields of natural language processing?

- A Symbolic and numeric**
- B Time and motion**
- C Algorithmic and heuristic**
- D Understanding and generation**

Ans C

36 What is the name of the computer program that contains the distilled knowledge of an expert?

- A Database management system**
- B Management information system**
- C Expert system**
- D Artificial intelligence**

Ans C

37 Decision support programs are designed to help managers make

- A Budget projections**
- B Visual presentations**
- C Business decisions**
- D Vacation schedules**

Ans C

38 Elementary linguistic units that are smaller than words are?

- A Allophones**
- B Phonemes**
- C Syllables**
- D All of the mentioned**

Ans D

39 Which of the factors affect the performance of learner system does not include?

- A Representation scheme used**
- B Training scenario**

C Type of feedback
D Good data structures

Ans D

40 In language understanding, the levels of knowledge that does not include?

A Phonological
B Syntactic
C Empirical
D Logical

Ans C

41 How many types of agents are there in artificial intelligence?

A 1
B 2
C 3
D 4

Ans D

42 What is the rule of simple reflex agent?

A Simple-action rule
B Condition-action rule
C Simple & condition-action rule
D None of the mentioned

Ans B

43 What are the composition for agents in artificial intelligence?

A Program
B Architecture
C Both program & architecture
D None of the mentioned

Ans C

44 Which action sequences are used to achieve the agent's goal?

A Search
B Plan
C Retrieve
D Both search & plan

Ans D

45 Which element in the agent are used for selecting external actions?

- A Perceive
- B Performance
- C Learning
- D Actuator

Ans B

46 Agents behavior can be best described by

- A Perception sequence
- B Agent function
- C Sensors and actuators
- D Environment in which agent is performing

Ans B

47 Rational agent is the one who always does the right thing.

- A True
- B False

Ans A

48 Performance measures are fixed for all agents.

- A True
- B False

Ans A

49 The game of poker is a single agent.

- A True
- B False

Ans B

50 An agent is composed of

- A Architecture
- B Agent function
- C Perception sequence
- D Architecture and program

Ans D

51 What is state space?

- A The whole problem
- B Your definition to a problem

C Problem you design
D Representing your problem with variable and parameter

Ans D

52 A search algorithm takes as an input and returns as an output.

A Input, output
B Problem, solution
C Solution, problem
D Parameters, sequence of actions

Ans B

53 A problem in a search space is defined by one of these state

A Initial state
B Last state
C Intermediate state
D All of the mentioned

Ans A

54 The set of actions for a problem in a state space is formulated by a

A Intermediate states
B Initial state
C Successor function, which takes current action and returns next immediate state
D None of the mentioned

Ans C

55 The process of removing detail from a given state representation is called

A Extraction
B Abstraction
C Information retrieval
D Mining of data

Ans B

56 Fuzzy inference systems (fis) have multidisciplinary nature.

A True
B False

Ans. A

57 Machine learning typically follows phases according to Finlay.

A 2
B 3
C 5

Ans. B

58 Complex problems usually have well-defined steps

A True
B False

Ans. B

59 Fuzzy logic is a subset of conventional (boolean) logic.

A True
B False

Ans. B

60 Mamdani's method was among the first built using fuzzy set theory.

A Control systems
B Expert systems
C Decision analysis systems

Ans. A

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

A Aggregation
B Fuzzification
C Implication

Ans. A

62 Learning works on existing facts and knowledge and deduces new knowledge from the old.

A Inductive
B Application
C Deductive

Ans. C

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

A True
B False

Ans. A

64 Usually a graph is chosen to represent a fuzzy set

A Triangular
B Conical
C Circular

Ans. A

65 The tractable problems are further divided into structured and problems

A Complex
B Simple
C Non-structured

Ans. A

66 Which one is not the advantage of neural network

A Excellent for pattern recognition
B Excellent classifiers
C None of the given

Ans. C

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

A Knowledge
B Solution
C Problem

Ans. C

68 Artificial intelligence has its expansion in the following application.

A Planning and scheduling
B Robotics
C All of the above

Ans. C

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

- A Machine intelligence
- B Artificial intelligence
- C Human intelligence

Ans. B

70 What is the term used for describing the judgmental or commonsense part of problem solving?

- A Analytical
- B Heuristic

Ans. B

71 What was originally called the “imitation game” by its creator?

- A The logic theorist
- B Lisp
- C The turing test

Ans. C

72 The field that investigates the mechanics of human intelligence is

- A Psychology
- B Cognitive science
- C Sociology

Ans. B

73 Strong artificial intelligence is

- A A set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans.
- B The study of mental faculties through the use of mental models implemented on a computer.
- C The embodiment of human intellectual capabilities within a computer.

Ans. C

74 Weak ai is

- A A set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans.
- B The study of mental faculties through the use of mental models implemented on a computer.
- C The embodiment of human intellectual capabilities within a computer.

Ans. B

75 Prior to the invention of time-sharing, the prevalent method of computer access was

A Batch processing
B Telecommunication

Ans. A

76 In Lisp, the addition 3 + 2 is entered as

A 3+2
B 3 add 2
C (+3 2)

Ans. C

77 In Lisp, the function returns t if is a cons cell and nil otherwise

A (cons)
B (consp)

Ans. B

78 In Lisp, what is the function assigns the symbol x to y?

A (setq y x)
B (setq y 'x')
C (set y = 'x')

Ans. B

79 Lisp machines also are known as

A Time-sharing terminals
B Ai workstations

Ans. B

80 What are the two subfields of natural language processing?

A Context and expectations
B Generation and understanding
C Semantics of pragmatics

Ans. B

81 Which of the following function returns t if the object is a number in lisp?

A (number <object>)
B (numberp <object>)
C (numericp <object>)

Ans. B

82 The area of ai that investigates methods of facilitating communication between people and computers is

- A Natural language processing**
- B Symbolic processing**
- C Robotics**

Ans. A

83 In lisp, the atom that stands for “false” is

- A T**
- B Nil**

Ans. B

84 A key knowledge base contains information in the form of

- A Associations**
- B Actions**
- C All of the mentioned**

Ans. C

85 Special programs that assist programmers are called

- A Symbolic programmers**
- B Intelligent programming tools**

Ans. B

86 What is back propagation?

- A It is another name given to the curvy function in the perceptron**
- B It is the transmission of error back through the network to adjust the inputs**
- C It is the transmission of error back through the network to allow weights to be adjusted so that the network can learn**

Ans. C

87 Which of the following is not the promise of artificial neural network?

- A It can explain result**
- B It can survive the failure of some nodes**
- C It has inherent parallelism**

Ans. A

88 Neural networks are complex with many parameters.

- A Nonlinear functions
- B Linear functions
- C Discrete functions

Ans. B

89 The network that involves backward links from output to the input and hidden layers is called

- A Self organizing maps
- B Recurrent neural network

Ans. B

90 There exist only two types of quantifiers, universal quantification and existential quantification.

- A True
- B False

Ans. A

91 First order logic is also known as

- A First order predicate calculus
- B Quantification theory
- C All of the mentioned

Ans.

92 General games involves

- A Single-agent
- B Multi-agent
- C Only single-agent and multi-agent

Ans. C

93 Zero sum games are the one in which there are two agents whose actions must alternate and in which the utility values at the end of the game are always the same.

- A True
- B False

Ans. B

94 The initial state and the legal moves for each side define the for the game.

- A Search tree
- B Game tree

Ans. B

95 Which is the most straightforward approach for planning algorithm?

- A Best-first search**
- B State-space search**

Ans. B

96 How many ways are available to solve the state-space search?

- A 1**
- B 2**

Ans. B

97 What is the main advantage of backward state-space search?

- A Cost**
- B Actions**
- C Relevant actions**

Ans. C

98 Which approach is to pretend that a pure divide and conquer algorithm will work?

- A Goal independence**
- B Subgoal independence**
- C Both goal & subgoal independence**

Ans. B

99 Though local search algorithms are not systematic, key advantages would include

- A Less memory & finds a solution in large infinite space**
- B Finds a solution in large infinite space**

Ans. A

100 A complete, local search algorithm always finds goal if one exists, an optimal algorithm always finds a global minimum/maximum.

- A True**
- B False**

Ans. A

Some Important Links for AI MCQS:

<https://www.objectivequiz.com/objective-questions/computer-science/artificial-intelligence>

<https://compsciedu.com/mcq-questions/Artificial-Intelligence/Introduction-to-AI>

<https://www.onlineinterviewquestions.com/artificial-intelligence-mcq/>

<https://www.examveda.com/computer-science/practice-mcq-question-on-artificial-intelligence/>

<https://www.includehelp.com/ml-ai/artificial-intelligence-aptitude-questions-and-answers-mcq-.aspx>