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**Started on** Thursday, 25 November 2021, 11:47 AM

**State** Finished

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**Time taken** 45 mins 1 sec

Question **1**

Incorrect

Marked out of  
1.00

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

\_\_\_\_\_

Select one:

- ☐ a. pattern matching
- ☐ b. relative symbolism
- ☐ c. cognitive science
- ☒ d. heuristic processing ✖

The correct answer is: pattern matching

Question **2**

Correct

Marked out of  
1.00

The attribute "isa" is used to show \_\_\_\_\_

Select one:

- ☐ a. class property
- ☒ b. class inclusion ✔
- ☐ c. class value
- ☐ d. class membership

The correct answer is: class inclusion

Question **3**

Correct

Marked out of  
1.00

Local maxima are also known as \_\_\_\_\_

Select one:

- ☐ a. foot regions
- ☐ b. hilltops
- ☒ c. foothills ✔
- ☐ d. hilly regions

The correct answer is: foothills

Question 4

Incorrect

Marked out of  
1.00

Which heuristic technique uses the difference table?

Select one:

- ☐ a. Best First Search
- ☐ b. None of the mentioned
- ☒ c. Constraint satisfaction ✖
- ☐ d. Means-Ends Analysis

The correct answer is: Means-Ends Analysis

Question 5

Incorrect

Marked out of  
1.00

A semantic network is also known as a \_\_\_\_

Select one:

- ☐ a. None of the mentioned
- ☐ b. slot-and-filler structure
- ☒ c. collection of slots ✖
- ☐ d. propose-and-refine structure

The correct answer is: slot-and-filler structure

Question 6

Correct

Marked out of  
1.00

If the cut off depth is  $d$  and branching factor is  $b$ , What is the time and space complexity of BFS (Breadth first search) respectively?

Select one:

- ☐ a.  $O(\text{pow}(b,d)), O(d)$
- ☒ b.  $O(\text{pow}(b,d)), O(\text{pow}(b,d))$  ✔
- ☐ c.  $O(b), O(\text{pow}(b,d))$
- ☐ d.  $O(b), O(d)$

The correct answer is:  $O(\text{pow}(b,d)), O(\text{pow}(b,d))$

Question 7

Incorrect

Marked out of  
1.00

There is a trade-off between \_\_\_\_

Select one:

- ☒ a. cost of evaluating a heuristic function and an increase in search time ✖
- ☐ b. cost of evaluating a heuristic function and an increase in cost
- ☐ c. cost of evaluating a heuristic function and savings in cost offered by that function
- ☐ d. cost of evaluating a heuristic function and savings in search time offered by that function

The correct answer is: cost of evaluating a heuristic function and savings in search time offered by that function

Question **8**

Correct

Marked out of  
1.00

Several theorems of \_\_\_\_ were proved by The Logic Theorist.

Select one:

- ☐ a. Principea Mathematicca
- ☒ b. Principia Mathematica ✓
- ☐ c. Principle Mathematics
- ☐ d. Principles of Mathematics

The correct answer is: Principia Mathematica

Question **9**

Correct

Marked out of  
1.00

For problem reduction, \_\_\_\_\_ algorithm is most appropriate.

Select one:

- ☐ a. A star
- ☐ b. Depth first search
- ☒ c. AO star ✓
- ☐ d. Breadth first search

The correct answer is: AO star

Question **10**

Correct

Marked out of  
1.00

A star algorithm is optimal, if  $h(n)$  is an admissible heuristic.

Select one:

- ☐ a. None of the mentioned
- ☒ b. True ✓
- ☐ c. False
- ☐ d. cannot be determined

The correct answer is: True

Question **11**

Incorrect

Marked out of  
1.00

The attribute "instance" is used to show \_\_\_\_

Select one:

- ☐ a. class property
- ☐ b. class inclusion
- ☐ c. class membership
- ☒ d. class value ✗

The correct answer is: class membership

Question **12**

Incorrect

Marked out of  
1.00

An expert system is composed of \_\_\_\_\_

Select one:

- ☐ a. User Interface
- ☐ b. Knowledge Base
- ☐ c. All of the mentioned
- ☒ d. Inference engine ✖

The correct answer is: All of the mentioned

Question **13**

Correct

Marked out of  
1.00

In Simulated Annealing, moves to worse states \_\_\_\_\_

Select one:

- ☐ a. are never considered
- ☒ b. may be accepted ✔
- ☐ c. never get generated
- ☐ d. none of the mentioned

The correct answer is: may be accepted

Question **14**

Incorrect

Marked out of  
1.00

Due to advances in the fields of Mathematics and Physics, the study of \_\_\_\_ got separated.

Select one:

- ☒ a. Artificial Intelligence ✖
- ☐ b. Psychology
- ☐ c. Neuroscience
- ☐ d. Philosophy

The correct answer is: Philosophy

Question **15**

Correct

Marked out of  
1.00

What was originally called the "imitation game" by its creator?

Select one:

- ☒ a. The Turing Test ✔
- ☐ b. LISP
- ☐ c. Cybernetics
- ☐ d. The Logic Theorist

The correct answer is: The Turing Test

Question **16**

Incorrect

Marked out of  
1.00

Simulated annealing is analogous to \_\_\_\_\_

Select one:

- ☐ a. Steepest Ascent Hill Climbing
- ☐ b. Valley Ascending
- ☒ c. Simple Hill Climbing ✖
- ☐ d. Valley Descending

The correct answer is: Valley Descending

Question **17**

Correct

Marked out of  
1.00

Inferring relationships between physical objects was handled by \_\_\_\_\_

Select one:

- ☐ a. EPAM
- ☒ b. GPS ✔
- ☐ c. PARRY
- ☐ d. None of the mentioned

The correct answer is: GPS

Question **18**

Correct

Marked out of  
1.00

Partially commutative, monotonic production systems are useful for solving \_\_\_\_\_

Select one:

- ☐ a. irrevocable problems
- ☒ b. ignorable problems ✔
- ☐ c. all types of problems
- ☐ d. recoverable problems

The correct answer is: ignorable problems

Question **19**

Correct

Marked out of  
1.00

Which of the following is not an expert task?

Select one:

- ☐ a. Financial analysis
- ☐ b. Engineering design
- ☐ c. Scientific analysis
- ☒ d. Integral calculus ✔

The correct answer is: Integral calculus

Question **20**

Correct

Marked out of  
1.00

What is meant by simulated annealing in AI?

Select one:

- ☐ a. It will not return an optimal solution when there is a proper cooling schedule
- ☐ b. None of the mentioned
- ☐ c. Returns an optimal solution when there is no proper cooling schedule
- ☒ d. Returns an optimal solution when there is a proper cooling schedule ✓

The correct answer is: Returns an optimal solution when there is a proper cooling schedule

Question **21**

Incorrect

Marked out of  
1.00

Search processes are vulnerable to \_\_\_\_\_

Select one:

- ☐ a. combinatorial explosion
- ☐ b. none of the mentioned
- ☐ c. the start state
- ☒ d. backtracking ✗

The correct answer is: combinatorial explosion

Question **22**

Incorrect

Marked out of  
1.00

Which of the following statements is FALSE?

Select one:

- ☒ a. Means-Ends Analysis is based on backward reasoning. ✗
- ☐ b. Means-Ends Analysis involves forward reasoning and backward reasoning.
- ☐ c. Means-Ends Analysis is based on operationalization.
- ☐ d. Means-Ends Analysis is based on operator subgoalings.

The correct answer is: Means-Ends Analysis is based on operationalization.

Question **23**

Correct

Marked out of  
1.00

Which search method takes less memory?

Select one:

- ☐ a. Linear Search
- ☐ b. Breadth-First search
- ☒ c. Depth-First Search ✓
- ☐ d. Optimal search

The correct answer is: Depth-First Search

Question **24**

Correct

Marked out of  
1.00

Which of the following statements is FALSE?

Select one:

- ☐ a. Prolog is based on predicate logic.
- ☐ b. None of the mentioned.
- ☐ c. Prolog is a declarative language.
- ☒ d. Prolog is based on propositional logic. ✓

The correct answer is: Prolog is based on propositional logic.

Question **25**

Incorrect

Marked out of  
1.00

Which of the following is not a feature related to AO graphs?

Select one:

- ☐ a. None of the mentioned
- ☐ b. Problem reduction
- ☒ c. A longer path may be better ✗
- ☐ d. Backward propagation

The correct answer is: None of the mentioned

Question **26**

Correct

Marked out of  
1.00

To perform search in an AND-OR graph, FUTILITY value is used. The search is relinquished if \_\_

Select one:

- ☐ a. the estimated cost of a solution is same as the FUTILITY value.
- ☒ b. the estimated cost of a solution is greater than the FUTILITY value. ✓
- ☐ c. the estimated cost of FUTILITY value is smaller than the estimated cost of the solution.
- ☐ d. the estimated cost of FUTILITY value is same as the estimated cost of the solution.

The correct answer is: the estimated cost of a solution is greater than the FUTILITY value.

Question **27**

Correct

Marked out of  
1.00

The initial attempt in the field of Theorem Proving was captured by \_\_\_\_

Select one:

- ☐ a. EPAM
- ☒ b. Logic Theorist ✓
- ☐ c. PARRY
- ☐ d. GPS

The correct answer is: Logic Theorist

Question **28**

Correct

Marked out of  
1.00

DENDRAL uses the strategy of \_\_\_\_\_

Select one:

- ☐ a. plan-test-generate
- ☒ b. plan-generate-test ✓
- ☐ c. None of the mentioned
- ☐ d. test-plan-generate

The correct answer is: plan-generate-test

Question **29**

Incorrect

Marked out of  
1.00

In order to gain a deeper understanding of the problem, it is important to understand \_\_\_\_

Select one:

- ☐ a. what a heuristic will offer
- ☐ b. why a heuristic works, or why it doesn't work
- ☒ c. how a heuristic works ✗
- ☐ d. why a heuristic works

The correct answer is: why a heuristic works, or why it doesn't work

Question **30**

Incorrect

Marked out of  
1.00

Simulated annealing allows \_\_\_\_\_

Select one:

- ☐ a. no exploration of the search space early on
- ☐ b. limited exploration of the search space early on
- ☐ c. enough exploration of the search space early on
- ☒ d. stratified exploration of the search space early on ✗

The correct answer is: enough exploration of the search space early on

Question **31**

Correct

Marked out of  
1.00

The initial work in the field of Game Playing was done in \_\_\_\_\_

Select one:

- ☐ a. Tic-Tac-Toe
- ☐ b. Go
- ☐ c. Backgammon
- ☒ d. Checkers ✓

The correct answer is: Checkers



Question **32**

Incorrect

Marked out of  
1.00

A heuristic search technique considers all the moves from the current state and selects the best one as the next state. This technique is known as \_\_\_\_

Select one:

- ☐ a. Gradient search
- ☐ b. Constraint satisfaction
- ☐ c. Simple hill climbing
- ☒ d. None of the mentioned ✖

The correct answer is: Gradient search

Question **33**

Incorrect

Marked out of  
1.00

The first step to retrieve a value V for attribute A of an instance object O is \_\_\_\_

Select one:

- ☐ a. to find A in the knowledge base.
- ☐ b. to perform type checking of A in the knowledge base.
- ☒ c. to find V in the knowledge base. ✖
- ☐ d. to find O in the knowledge base.

The correct answer is: to find O in the knowledge base.

Question **34**

Correct

Marked out of  
1.00

Operator subgoal is used to satisfy the \_\_\_\_ necessary for an operator to be applied.

Select one:

- ☐ a. implications
- ☒ b. preconditions ✔
- ☐ c. conclusions
- ☐ d. None of the mentioned

The correct answer is: preconditions

Question **35**

Correct

Marked out of  
1.00

Which of the following is an example of the general problem-solving architecture?

Select one:

- ☐ a. DENDRAL
- ☒ b. SOAR ✔
- ☐ c. OPS5
- ☐ d. MYCIN

The correct answer is: SOAR