In the divide and conquer strategy, a problem is solved recursively by applying three steps at each level of the \_\_\_\_\_

recursion

In functional abstraction, the implementation detail of the computational method is hidden. You can think of a function as a \_\_\_\_\_\_\_

black box

In a \_\_\_\_\_\_\_, at each decision point the choice that has the smallest immediate

greedy algorithm

In computer science, \_\_\_\_\_ is used to manage the complexity of a lot of what is designed and created. Computer hardware is seen as components or black boxes

abstraction

\_\_\_\_\_\_\_\_\_ is a technique that allows you to separate the way that a compound data object is used, from the details of how it is constructed

Data abstraction

A \_\_\_\_\_\_\_ is a piece of data provided as input to a function or procedure

parameter

Another advantage of this paradigm is that it often plays a part in finding other \_\_\_\_\_\_\_\_\_.

efficient algorithms

\_\_\_\_\_\_\_ is the first step of the divide and conquer strategy

Divide

The \_\_\_\_\_ of an algorithm is the amount of storage space that it requires while running from start to completion

runtime

\_\_\_\_\_\_\_\_\_\_ approach is similar to divide-and-conquer in that both solve problems by breaking it down into several sub-problems that can be solved recursively

Dynamic programming

Problem Solving Algorithm CIT108

(1) A common type of strategy is an \_\_\_\_

a.

good guidelines

b.

solution

c.

algorithm>>>>>>>>>>>>>>>>>

d.

system

(2) \_\_\_\_\_ approach to problem-solving involves trying a number of different solutions and ruling out those that do not work

a.

Simulation

b.

A trial-and-error>>>>>>>>>>>>>>>>>>

c.

introspection

d.

modelling

(3) When using trial and error, one would continue to \_\_\_\_\_\_\_\_ solutions until the problem is solved

a.

study

b.

expert

c.

select

d.

try different>>>>>>>>>>>>>>>>

(4) One example of means-end analysis can be found by using the \_\_\_\_\_\_\_\_

Tower of Hanoi paradigm>>>>>>>>>>>>>>

Algorithm

Power strings

Tower of models

(5) \_\_\_\_\_\_\_\_ is the process of converting a program into instructions that can be understood by the computer.

a.

binary

b.

coding

c.

Compiling>>>>>>>>>>>>>>>

d.

algorithm

(6) A \_\_\_\_\_\_\_ is a plan used to find a solution or overcome a challenge

solution

problem-solving strategy>>>>>>>>>>>>>>>>

challenge

outcome

(7) \_\_\_\_\_\_ approach to problem-solving involves trying a number of different solutions and ruling out those that do not work

introspection

Simulation

modelling

A trial-and-error>>>>>>>>>>>>>>>>>>

(8) Each problem-solving strategy includes multiple \_\_\_\_ to provide you with helpful guidelines on how to resolve a business problem or industry challenge

rules

laws

decisions

steps>>>>>>>>>>>>

(9) When using trial and error, one would continue to \_\_\_\_\_\_\_\_ solutions until the problem is solved

expert

study

select

try different>>>>>>>>>>>>>>>>>>>

(10) \_\_\_\_\_\_ is another type of problem solving strategy

A trial by error

A design

A computer modelling

A heuristic>>>>>>>>>>>>>

(11)\_\_\_\_\_\_\_\_\_\_\_\_ This strategy involves choosing and analysing an action at a series of smaller steps to move closer to the goal

Hanoi paradigm

Means-End Analysis>>>>>>>>>>>>>

Tower of designs

The process of design

(12) Various methods of studying problem solving exist including introspection, simulation, computer modelling, and \_\_\_\_\_\_\_

experimentation>>>>>>>>>>>>

conduct

system

design

(13) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ this strategy is characterised by a lack of sophistication in terms of their approach to the solution

a.

Debugging

b.

Compiler

c.

Brute-force approach>>>>>>>>>>>>>>>>>>>>>>>>>>

d.

Dynamic Programming

(14) Debugging is often a very time-consuming \_\_\_\_ when it comes to being a programmer.

a.

define

b.

easy

c.

complicated

d.

chore>>>>>>>>>>>>>>>>>

(15) \_\_\_\_\_\_\_ is the process of finding and fixing errors in program code.

a.

system

b.

errors

c.

Debugging>>>>>>>>>>>

d.

problem solving

(16) Bugs are \_\_\_\_ with a program that cause it to stop working or produce incorrect or undesirable results

a.

designs

b.

errors>>>>>>>>>>>>

c.

input

d.

compiling