Тест начат	Среда, 25 Май 2022, 00:26
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:33
Прошло времени	6 мин. 41 сек.
Баллы	20,00/30,00
Оценка	**66,67** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

Which of the following statement(s) is TRUE?

- a. A hash function takes a message of arbitrary length and generates a fixed length code. ✔
- b. A hash function takes a message of fixed length and generates a code of variable length.
- c. A hash function may give the same hash value for distinct messages.

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Вопрос **2**

Нет ответа

Балл: 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = 0	Выберите...
lim f(x)/g(x) = ConstNonZero	Выберите...
lim f(x)/g(x) = Infinity	Выберите...

Правильный ответ: lim f(x)/g(x) = 0 → f(x) = o(g(x)), lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x))

Вопрос **3**

Верно

Баллов: 1,00 из 1,00

The change making problem can be solved by dynamic programming

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **4**

Верно

Баллов: 1,00 из 1,00

The running time of an algorithm is the number of instructions it executes when run on a particular instance

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **5**

Нет ответа

Балл: 1,00

Non-functional testing Parameters, match the following

portability	Выберите...
interoperability	Выберите...
efficiency	Выберите...
flexibility	Выберите...

Правильный ответ:
portability → The flexibility of software to transfer from its current hardware or software environment,

interoperability → This non-functional parameter checks a software system interfaces with other software systems,
efficiency → The extent to which any software system can handles capacity, quantity and response time,

flexibility → The term refers to the ease with which the application can work in different hardware and software configurations

Вопрос **6**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Manages schedules and activities related to Performance Testing projects

a. Performance Engineering Lead ✔

b. Performance Engineer

c. Project Manager

d. Monitoring Support

Правильный ответ:

Performance Engineering Lead

Вопрос **7**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Monitors performance tests using Performance monitors

- a. Performance Engineering Lead
- b. Project Manager
- c. Monitoring Support ✔
- d. Performance Engineer

Правильный ответ:
Monitoring Support

Вопрос **8**

Верно

Баллов: 1,00 из 1,00

Quick sort, like merge sort, applies the

- a. gives us an upper bound on the running time for any input
- b. divide-and-conquer paradigm ✔
- c. Always a least-weight edge
- d. minimum of any edge satisfying the property

Правильный ответ:
divide-and-conquer paradigm

Вопрос **9**

Неверно

Баллов: 0,00 из 1,00

What is the complexity of quick sort algorithm in worst case? Write without spaces, array size N.

Ответ: O(N) ✖

Правильный ответ: O(N N)

Вопрос **10**

Верно

Баллов: 1,00 из 1,00

Which one is an algorithm which recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly?

- a. Greedy algorithm
- b. Dynamic Programming
- c. Big Oh notation
- d. Divide and conquer algorithm ✔

Правильный ответ:

Divide and conquer algorithm

Вопрос **11**

Неверно

Баллов: 0,00 из 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower size solutions.

- a. Divide and Conquer
- b. Dynamic Programming ✖
- c. Brute Force Solution
- d. Sorting algorithms
- e. Search algorithms

Правильный ответ: Divide and Conquer

Вопрос **12**

Нет ответа

Балл: 1,00

Non-functional testing Parameters, match the following

The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system	Выберите...
The parameter determines the degree to which user can depend on the system during its operation	Выберите...
The parameter checks that the software system continues to function and recovers itself in case of system failure	Выберите...
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand	Выберите...
The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources	Выберите...
The extent to which any software system continuously performs the specified functions without failure	Выберите...

Правильный ответ:

The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system → Usability,

The parameter determines the degree to which user can depend on the system during its operation → Availability,

The parameter checks that the software system continues to function and recovers itself in case of system failure → Survivability,

The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand → Scalability,

The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources → Security,

The extent to which any software system continuously performs the specified functions without failure → Reliability

Вопрос **13**

Нет ответа

Балл: 1,00

Array located in dynamic memory?

- a. vector
- b. Pointer
- c. Dynamic object
- d. Allocated array
- e. Dynamic array

Правильный ответ: Dynamic array

Вопрос **14**

Верно

Баллов: 1,00 из 1,00

What will be the output?

```
using namespace std;

int fib(int n)
{
    if (n <= 1)
        return n;
    return fib(n-1) + fib(n-2);
}

int main ()
{
    int n = 9;
    cout << fib(n);
    getchar();
    return 0;
}
```

- a. 16
- b. 34 ✔
- c. 0
- d. 1
- e. 33

Правильный ответ:
34

Вопрос **15**

Верно

Баллов: 1,00 из 1,00

What is the goal of soak testing?

- a. test the system resistance in the event of a sudden spike of concurrent users
- b. validate that the system is able to handle a given load
- c. determine how the system works under particular load ✔
- d. check robustness of a system in case of extreme load

Правильный ответ:

determine how the system works under particular load

Вопрос **16**

Верно

Баллов: 1,00 из 1,00

Match the following

Speed	Determines whether the application responds quickly	✔
Stability	Determines if the application is stable under varying loads	✔
Scalability	Determines maximum user load the software application can handle	✔

Правильный ответ:

Speed → Determines whether the application responds quickly,

Stability → Determines if the application is stable under varying loads,

Scalability → Determines maximum user load the software application can handle

Вопрос **17**

Верно

Баллов: 1,00 из 1,00

What is the goal of load tests?

- a. test the system resistance in the event of a sudden spike of concurrent users
- b. validate that the system is able to handle a given load ✔
- c. determine how the system works under particular load
- d. check robustness of a system in case of extreme load

Правильный ответ:

validate that the system is able to handle a given load

Вопрос **18**

Верно

Баллов: 1,00 из 1,00

Dynamic Programming is mainly an optimization over plain recursion.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **19**

Верно

Баллов: 1,00 из 1,00

Which one is the definition of NFT?

- a. type of testing of Software to check non-functional aspects ✔
- b. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.
- c. prepares for performance test execution, executes performance test and analyze it
- d. programming code specific to performance testing to automate the real-world user behavior

Правильный ответ:

type of testing of Software to check non-functional aspects

Вопрос **20**

Верно

Баллов: 1,00 из 1,00

Which one is incorrect performance test case?

- a. Verify response time is not more than 4 secs when 1000 users access the website simultaneously
- b. Verify design of the application, is it easy to use ✔
- c. Check the maximum number of users that the application can handle before it crashes
- d. Check CPU and memory usage of the application and the database server under peak load conditions
- e. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
- f. Check database execution time when 500 records are read/written simultaneously

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **21**

Неверно

Баллов: 0,00 из 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Merge Sort
- b. Binary Search
- c. Sieve of Erathosphenes ✖
- d. Thernary Search

Правильный ответ: Thernary Search

Вопрос **22**

Нет ответа

Балл: 1,00

How many permutations of elements for set with size N exist? Write without spaces.

Ответ: ✖

Правильный ответ: N!

Вопрос **23**

Верно

Баллов: 1,00 из 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **24**

Нет ответа

Балл: 1,00

Match the following

amount of virtual memory used	Выберите...
shows the bits per second used by a network interface	Выберите...
amount of physical memory available to processes on a computer	Выберите...
an amount of time processor spends executing non-idle threads	Выберите...
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage	Выберите...
amount of time disk is busy executing a read or write request	Выберите...

Правильный ответ:

amount of virtual memory used → Committed memory,

shows the bits per second used by a network interface → Bandwidth,

amount of physical memory available to processes on a computer → Memory use,

an amount of time processor spends executing non-idle threads → Processor Usage,

number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,

amount of time disk is busy executing a read or write request → Disk time

Вопрос **25**

Верно

Баллов: 1,00 из 1,00

If we divide an array into groups of 3, find the median of each group, recursively find the median of those medians, partition, and recurse, then we can obtain a linear-time median-finding algorithm

Выберите один ответ:

- Верно
- Неверно ✔

Правильный ответ: Неверно

Вопрос **26**

Верно

Баллов: 1,00 из 1,00

Type of Software Testing

- a. Functional, non functional, maintenance ✔
- b. Functional, non functional
- c. Non functional, maintenance
- d. Analyzing, rateing, maintenance

Правильный ответ:
Functional, non functional, maintenance

Вопрос **27**

Нет ответа

Балл: 1,00

Which algorithm allows us to find all prime numbers up to given N?

- a. Thernary Search
- b. Merge Sort
- c. Binary Search
- d. Sieve of Erathosphenes

Правильный ответ: Sieve of Erathosphenes

Вопрос **28**

Верно

Баллов: 1,00 из 1,00

What is the time complexity of the brute force algorithm used to find the longest common subsequence?

- a. O(n2)
- b. O(2n) ✔
- c. O(n3)
- d. O(n)

Правильный ответ:
O(2n)

Вопрос **29**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Facilitating and coordinating all schedules related to SDLC phases and infrastructure

a. Performance Engineering Lead

b. Performance Engineer

c. Project Manager ✔

d. Monitoring Support

Правильный ответ:

Project Manager

Вопрос **30**

Верно

Баллов: 1,00 из 1,00

Which one is an algorithmic technique for solving an optimization problem by breaking it down into simpler subproblems and utilizing the fact that the optimal solution to the overall problem depends upon the optimal solution to its subproblems?

a. Greedy algorithms

b. Divide and conquer algorithm

c. Dynamic Programming ✔

d. Big Oh notation

Правильный ответ:
Dynamic Programming

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:32
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:39
Прошло времени	6 мин. 37 сек.
Баллы	11,08/30,00
Оценка	**36,94** из 100,00

Вопрос **1**

Неверно

Баллов: 0,00 из 1,00

Choose which functional role best describes responsibility: Supports performance test execution as configuration or application issues are found

a. Application Support

b. Monitoring Support

c. Performance Engineering Lead ✖

d. Project Manager

Правильный ответ:
Application Support

Вопрос **2**

Неверно

Баллов: 0,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

a. False

b. Dynamic programming

c. Incremental approach ✖

d. f2 ,f4, f3, f1

Правильный ответ:
Dynamic programming

Вопрос **3**

Верно

Баллов: 1,00 из 1,00

Performance Testing Metrics

- a. Processor Usage, Garbage collection, Cool design
- b. Garbage collection, Top waits, Fast monitor
- c. Processor Usage, Memory use, Bandwidth ✔

Правильный ответ:
Processor Usage, Memory use, Bandwidth

Вопрос **4**

Неверно

Баллов: 0,00 из 1,00

Choose non functional aspects

- a. speed, response time, stability ✖
- b. performance, speed, design
- c. performance, usability, reliability
- d. reliability, scalability and resource usage

Правильный ответ:
performance, usability, reliability

Вопрос **5**

Верно

Баллов: 1,00 из 1,00

What do you mean by "Programming" in the context of Dynamic Programming?

- a. multiplication
- b. A tabular method ✔
- c. Always a least-weight edge
- d. Merge sort

Правильный ответ:
A tabular method

Вопрос **6**

Неверно

Баллов: 0,00 из 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. 1. sorted

  2. decrease-by-a-constant-factor
- b. 1. Warshall's
  2. Floyd's
- c. Euclid's algorithm, interpolation search, Nim... etc ✖
- d. A Directed Acyclic Graph ie a graph with no cycles

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **7**

Неверно

Баллов: 0,00 из 1,00

Which algorithm allows us to find all prime numbers up to given N?

- a. Binary Search ✖
- b. Merge Sort
- c. Thernary Search
- d. Sieve of Erathosphenes

Правильный ответ: Sieve of Erathosphenes

Вопрос **8**

Верно

Баллов: 1,00 из 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **9**

Частично правильный

Баллов: 0,83 из 1,00

Match the following

number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage	Private bytes ✔
an amount of time processor spends executing non-idle threads	Processor Usage ✔
shows the bits per second used by a network interface	Committed memory ✖
amount of time disk is busy executing a read or write request	Disk time ✔
amount of physical memory available to processes on a computer	Memory use ✔
amount of virtual memory used	Committed memory ✔

Правильный ответ:
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,

an amount of time processor spends executing non-idle threads → Processor Usage,

shows the bits per second used by a network interface → Bandwidth,

amount of time disk is busy executing a read or write request → Disk time,

amount of physical memory available to processes on a computer → Memory use,

amount of virtual memory used → Committed memory

Вопрос **10**

Неверно

Баллов: 0,00 из 1,00

What is the height of full binary tree if the total number of elements in it is N? Write in O notation without spaces. O(n) ✖ .

Правильный ответ: O(log(N))

Вопрос **11**

Неверно

Баллов: 0,00 из 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:

- Верно ✖
- Неверно

Правильный ответ: Неверно

Вопрос **12**

Верно

Баллов: 1,00 из 1,00

Performance Testing Process

- a. Identify testing environment, run project, making desing
- b. Plan performance tests, solveig algorithms, run code
- c. Design project, analyze system, run code
- d. Identify testing environment, plan performance tests, analyze, tune and retest ✔

Правильный ответ:
Identify testing environment, plan performance tests, analyze, tune and retest

Вопрос **13**

Частично правильный

Баллов: 0,25 из 1,00

Which of the following do we call the types of algorithms?

- [x] a. Dynamic Programming ✔
- [ ] b. Divide and Conquer
- [ ] c. Search algorithms
- [x] d. Binary algorithms ✖
- [ ] e. Brute Force Solution
- [x] f. Greedy algorithms ✔
- [ ] g. Sorting algorithms
- [ ] h. Tree algorithms

Правильные ответы: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **14**

Неверно

Баллов: 0,00 из 1,00

Memory given us by the OS at the beginning of program run, that allways has the same size?

- a. Hash ✖
- b. RAM
- c. Heap
- d. Static Memory
- e. Dynamic Memory

Правильный ответ: Static Memory

Вопрос **15**

Неверно

Баллов: 0,00 из 1,00

Which one is the definition of NFT?

- a. type of testing of Software to check non-functional aspects
- b. programming code specific to performance testing to automate the real-world user behavior
- c. prepares for performance test execution, executes performance test and analyze it
- d. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws. ✖

Правильный ответ:

type of testing of Software to check non-functional aspects

Вопрос **16**

Неверно

Баллов: 0,00 из 1,00

Which one is the definition of Performance Testing?

- a. type of testing of Software to check non-functional aspects ✖
- b. prepares for performance test execution, executes performance test and analyze it
- c. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws
- d. programming code specific to performance testing to automate the real-world user behavior

Правильный ответ:

set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws

Вопрос **17**

Верно

Баллов: 1,00 из 1,00

Which of the following algorithms has "divide and conquer" type?

- [ ] a. Iterating through permutations
- [x] b. Merge Sort ✔
- [x] c. Quick Sort ✔
- [ ] d. Sieve of Erathosphenes

Правильные ответы: Merge Sort, Quick Sort

Вопрос **18**

Неверно

Баллов: 0,00 из 1,00

Match the following

Create the performance tests according to your test design.	Identify the performance acceptance criteria ✖
Determine how usage is likely to vary amongst end users and identify key scenarios to test for all possible use cases.	Configuring the test environment ✖
Know your physical test environment, production environment and what testing tools are available.	Implement test design ✖
Prepare the testing environment before execution.	Plan & design performance tests ✖
This includes goals and constraints for throughput, response times and resource allocation.	Identify your testing environment ✖

Правильный ответ:
Create the performance tests according to your test design. → Implement test design,

Determine how usage is likely to vary amongst end users and identify key scenarios to test for all possible use cases. → Plan & design performance tests,

Know your physical test environment, production environment and what testing tools are available. → Identify your testing environment,

Prepare the testing environment before execution. → Configuring the test environment,

This includes goals and constraints for throughput, response times and resource allocation. → Identify the performance acceptance criteria

Вопрос **19**

Неверно

Баллов: 0,00 из 1,00

Match the following

Endurance testing	tests the software's reaction to sudden large spikes in the load generated by users ✖
Stress testing	is done to make sure the software can handle the expected load over a long period of time ✖
Load testing	involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to ide ✖
Spike testing	checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before ✖

Правильный ответ:
Endurance testing → is done to make sure the software can handle the expected load over a long period of time,

Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application,

Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live,

Spike testing → tests the software's reaction to sudden large spikes in the load generated by users

Вопрос **20**

Неверно

Баллов: 0,00 из 1,00

Which one is the definition of Performance Test Script?

a. type of testing of Software to check non-functional aspects ✖

b. prepares for performance test execution, executes performance test and analyze it

c. programming code specific to performance testing to automate the real-world user behavior

d. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.

Правильный ответ:

programming code specific to performance testing to automate the real-world user behavior

Вопрос **21**

Неверно

Баллов: 0,00 из 1,00

On that device the dynamic memory is located.

a. RAM

b. CPU ✖

c. Hard Drive

d. GPU

e. Processor

Правильный ответ: RAM

Вопрос **22**

Неверно

Баллов: 0,00 из 1,00

What is the goal of soak testing?

- a. validate that the system is able to handle a given load ✖
- b. determine how the system works under particular load
- c. check robustness of a system in case of extreme load
- d. test the system resistance in the event of a sudden spike of concurrent users

Правильный ответ:

determine how the system works under particular load

Вопрос **23**

Неверно

Баллов: 0,00 из 1,00

Which one is incorrect performance test case?

- a. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
- b. Verify response time is not more than 4 secs when 1000 users access the website simultaneously
- c. Check CPU and memory usage of the application and the database server under peak load conditions ✖
- d. Check the maximum number of users that the application can handle before it crashes
- e. Verify design of the application, is it easy to use
- f. Check database execution time when 500 records are read/written simultaneously

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **24**

Верно

Баллов: 1,00 из 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- a. big omega
- b. big theta
- c. big O ✔
- d. small omega

Правильный ответ:
big O

Вопрос **25**

Неверно

Баллов: 0,00 из 1,00

Scalability testing is done to make sure the software can handle the expected load over a long period of time

Выберите один ответ:

- Верно ✖
- Неверно

Правильный ответ: Неверно

Вопрос **26**

Верно

Баллов: 1,00 из 1,00

Which one is an algorithm which recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly?

- a. Greedy algorithm
- b. Divide and conquer algorithm ✔
- c. Dynamic Programming
- d. Big Oh notation

Правильный ответ:

Divide and conquer algorithm

Вопрос **27**

Верно

Баллов: 1,00 из 1,00

Which system attributes define Non functional requirements?

- a. security, reliability, performance, maintainability, scalability, usability ✔
- b. security, reliability, performance, maintainability, loading time
- c. security, reliability, utilization, maintainability, scalability, usability
- d. security, memorization, performance, maintainability, scalability, usability

Правильный ответ:

security, reliability, performance, maintainability, scalability, usability

Вопрос **28**

Верно

Баллов: 1,00 из 1,00

In dynamic programming, the technique of storing the previously calculated values is called _____

- a. mapping
- b. storing value property
- c. memoization ✔
- d. saving value property

Правильный ответ:
memoization

Вопрос **29**

Верно

Баллов: 1,00 из 1,00

Match the following

Speed	Determines whether the application responds quickly	✔
Scalability	Determines maximum user load the software application can handle	✔
Stability	Determines if the application is stable under varying loads	✔

Правильный ответ:
Speed → Determines whether the application responds quickly,

Scalability → Determines maximum user load the software application can handle,

Stability → Determines if the application is stable under varying loads

Вопрос **30**

Неверно

Баллов: 0,00 из 1,00

What of the following is true for array?

- a. We can insert elements at the mid
- b. We can easily erase elements from the beginning
- c. We can access any elements anytime with complexity O(1)
- d. We can insert elements from both ends
- e. We can insert elements only from 1 end ✖

Правильный ответ: We can access any elements anytime with complexity O(1)

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:25
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:39
Прошло времени	14 мин. 28 сек.
Баллы	26,83/30,00
Оценка	**89,44** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

Improve and enhance knowledge of the product behavior and technologies in use

a. performance analysis

b. non functional testing ✔

c. analysing data

Правильный ответ:
non functional testing

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

The basic parameters monitored during performance testing include - Processor Usage

Выберите один ответ:

Верно ✔

Неверно

Правильный ответ: Верно

Вопрос **3**

Верно

Баллов: 1,00 из 1,00

Which algorithm allows us to find all prime numbers up to given N?

- a. Merge Sort
- b. Thernary Search
- c. Sieve of Erathosphenes ✔
- d. Binary Search

Правильный ответ: Sieve of Erathosphenes

Вопрос **4**

Верно

Баллов: 1,00 из 1,00

In the potential method for amortized analysis, the potential energy should never go negative

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **5**

Верно

Баллов: 1,00 из 1,00

What is the goal of stress testing?

- a. determine how the system works under particular load
- b. test the system resistance in the event of a sudden spike of concurrent users
- c. check robustness of a system in case of extreme load ✔
- d. validate that the system is able to handle a given load

Правильный ответ:

check robustness of a system in case of extreme load

Вопрос **6**

Верно

Баллов: 1,00 из 1,00

Array located in dynamic memory?

- a. Dynamic array ✔
- b. vector
- c. Dynamic object
- d. Allocated array
- e. Pointer

Правильный ответ: Dynamic array

Вопрос **7**

Верно

Баллов: 1,00 из 1,00

The running time of an algorithm is the number of instructions it executes when run on a particular instance

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **8**

Верно

Баллов: 1,00 из 1,00

What will be the output?

```
using namespace std;

int fib(int n)
{
    if (n <= 1)
        return n;
    return fib(n-1) + fib(n-2);
}

int main ()
{
    int n = 9;
    cout << fib(n);
    getchar();
    return 0;
}
```

- a. 33
- b. 16
- c. 0
- d. 34 ✔
- e. 1

Правильный ответ:
34

Вопрос **9**

Верно

Баллов: 1,00 из 1,00

Which are part of the steps at each level of recursion?

- a. combine
- b. divide
- c. all of the above ✔
- d. conquer

Правильный ответ:
all of the above

Вопрос **10**

Верно

Баллов: 1,00 из 1,00

In dynamic programming, the technique of storing the previously calculated values is called _____

- a. saving value property
- b. storing value property
- c. mapping
- d. memoization ✔

Правильный ответ:
memoization

Вопрос **11**

Неверно

Баллов: 0,00 из 1,00

Some modification of this algorithms allows us to solve any equation f(x) = 0 if the function f is monotonic.

- a. Merge Sort
- b. Binary Search
- c. Sieve of Erathosphenes
- d. Thernary Search ✖

Правильный ответ: Binary Search

Вопрос **12**

Неверно

Баллов: 0,00 из 1,00

Which does NOT belong to testing methodology?

a. recording a simulation ✖

b. analyzing of test results

c. running the simulation in a large scale

d. analyzing of simulation

Правильный ответ:

analyzing of simulation

Вопрос **13**

Верно

Баллов: 1,00 из 1,00

Which one is the definition of NFT?

a. type of testing of Software to check non-functional aspects ✔

b. prepares for performance test execution, executes performance test and analyze it

c. programming code specific to performance testing to automate the real-world user behavior

d. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.

Правильный ответ:

type of testing of Software to check non-functional aspects

Вопрос **14**

Верно

Баллов: 1,00 из 1,00

In the merge-sort execution tree, the cost of operations done at each level of the tree is different.

Выберите один ответ:

- Верно
- Неверно ✔

Правильный ответ: Неверно

Вопрос **15**

Верно

Баллов: 1,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

a. Dynamic programming ✔

b. Incremental approach

c. False

d. f2 ,f4, f3, f1

Правильный ответ:
Dynamic programming

Вопрос **16**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Supports and maintains the Performance Test environment

a. Project Manager

b. Monitoring Support

c. Application Support

d. Performance Test Environment Support ✔

Правильный ответ:

Performance Test Environment Support

Вопрос **17**

Верно

Баллов: 1,00 из 1,00

A dynamic-programming algorithm solves each sub-problem just once and then saves its answer in a table, thereby avoiding the work of recomputing the answer every time it solves each sub problem.

Выберите один ответ:

Верно ✔

Неверно

Правильный ответ: Верно

Вопрос **18**

Частично правильный

Баллов: 0,33 из 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = 0	f(x) = o(g(x))	✔
lim f(x)/g(x) = Infinity	f(x) = O(g(x))	✖
lim f(x)/g(x) = ConstNonZero	f(x) = Theta(g(x))	✖

Правильный ответ: lim f(x)/g(x) = 0 → f(x) = o(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x)), lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x))

Вопрос **19**

Верно

Баллов: 1,00 из 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

- a. Divide and conquer
- b. Greedy algorithm
- c. Big Oh notation ✔
- d. Dynamic Programming

Правильный ответ:
Big Oh notation

Вопрос **20**

Частично правильный

Баллов: 0,50 из 1,00

What of the following is true for queue?

- [ ] a. We can easily erase elements from the beginning
- [x] b. We can insert elements only from 1 end ✔
- [ ] c. We can access any elements anytime with complexity O(1)
- [ ] d. We can insert elements from both ends

Правильные ответы: We can insert elements only from 1 end, We can easily erase elements from the beginning

Вопрос **21**

Верно

Баллов: 1,00 из 1,00

Non-functional testing Parameters, match the following

The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources	Security ✔
The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system	Usability ✔
The parameter determines the degree to which user can depend on the system during its operation	Availability ✔
The extent to which any software system continuously performs the specified functions without failure	Reliability ✔
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand	Scalability ✔
The parameter checks that the software system continues to function and recovers itself in case of system failure	Survivability ✔

Правильный ответ:

The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources → Security,

The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system → Usability,

The parameter determines the degree to which user can depend on the system during its operation → Availability,

The extent to which any software system continuously performs the specified functions without failure → Reliability,

The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand → Scalability,

The parameter checks that the software system continues to function and recovers itself in case of system failure → Survivability

Вопрос **22**

Верно

Баллов: 1,00 из 1,00

Which one is the definition of Performance Engineer?

- a. type of testing of Software to check non-functional aspects
- b. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws
- c. prepares for performance test execution, executes performance test and analyze it ✔
- d. programming code specific to performance testing to automate the real-world user behavior

Правильный ответ:

prepares for performance test execution, executes performance test and analyze it

Вопрос **23**

Верно

Баллов: 1,00 из 1,00

Which system attributes define Non functional requirements?

- a. security, reliability, performance, maintainability, loading time
- b. security, reliability, performance, maintainability, scalability, usability ✔
- c. security, memorization, performance, maintainability, scalability, usability
- d. security, reliability, utilization, maintainability, scalability, usability

Правильный ответ:

security, reliability, performance, maintainability, scalability, usability

Вопрос **24**

Верно

Баллов: 1,00 из 1,00

Performance Testing - is a software testing process used for testing the speed, response time, stability, reliability, scalability and resource usage of a software application under particular workload.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **25**

Верно

Баллов: 1,00 из 1,00

Which one is the definition of Performance Test Script?

a. programming code specific to performance testing to automate the real-world user behavior ✔

b. prepares for performance test execution, executes performance test and analyze it

c. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.

d. type of testing of Software to check non-functional aspects

Правильный ответ:

programming code specific to performance testing to automate the real-world user behavior

Вопрос **26**

Верно

Баллов: 1,00 из 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. A Directed Acyclic Graph ie a graph with no cycles
- b. 1. sorted ✔

  2. decrease-by-a-constant-factor
- c. Euclid's algorithm, interpolation search, Nim... etc
- d. 1. Warshall's
  2. Floyd's

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **27**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Supports performance test execution as configuration or application issues are found

- a. Project Manager
- b. Monitoring Support
- c. Application Support ✔
- d. Performance Engineering Lead

Правильный ответ:
Application Support

Вопрос **28**

Верно

Баллов: 1,00 из 1,00

Quick sort, like merge sort, applies the

- a. gives us an upper bound on the running time for any input
- b. minimum of any edge satisfying the property
- c. Always a least-weight edge
- d. divide-and-conquer paradigm ✔

Правильный ответ:
divide-and-conquer paradigm

Вопрос **29**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Monitors performance tests using Performance monitors

- a. Performance Engineering Lead
- b. Monitoring Support ✔
- c. Project Manager
- d. Performance Engineer

Правильный ответ:
Monitoring Support

Вопрос **30**

Верно

Баллов: 1,00 из 1,00

Dynamic programming can be applied to common problems like

- a. Assembly line scheduling
- b. Fibonacci problems
- c. Coin change problem: from a limited set of coins build a specified amount of change
- d. All of the above ✔
- e. None of them
- f. Finding if a word can be built from a set of strings

Правильный ответ:
All of the above

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:42
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:45
Прошло времени	2 мин. 57 сек.
Баллы	11,92/30,00
Оценка	**39,72** из 100,00

Вопрос **1**

Нет ответа

Балл: 1,00

What is the height of full binary tree if the total number of elements in it is N? Write in O notation without spaces. ✖ .

Правильный ответ: O(log(N))

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

The problem of weighted interval scheduling can be solved in O(n log n) time using dynamic programming

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **3**

Неверно

Баллов: 0,00 из 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

- a. Divide and conquer ✖
- b. Greedy algorithm
- c. Dynamic Programming
- d. Big Oh notation

Правильный ответ:
Big Oh notation

Вопрос **4**

Нет ответа

Балл: 1,00

How do we denote constant complexity with O notation? Write without spaces.

Ответ: ✖

Правильный ответ: O(1)

Вопрос **5**

Верно

Баллов: 1,00 из 1,00

Dynamic programming can be applied to common problems like

- a. Coin change problem: from a limited set of coins build a specified amount of change
- b. All of the above ✔
- c. Assembly line scheduling
- d. None of them
- e. Finding if a word can be built from a set of strings
- f. Fibonacci problems

Правильный ответ:
All of the above

Вопрос **6**

Верно

Баллов: 1,00 из 1,00

Match the following

Stability	Determines if the application is stable under varying loads	✔
Speed	Determines whether the application responds quickly	✔
Scalability	Determines maximum user load the software application can handle	✔

Правильный ответ:
Stability → Determines if the application is stable under varying loads,

Speed → Determines whether the application responds quickly,

Scalability → Determines maximum user load the software application can handle

Вопрос **7**

Верно

Баллов: 1,00 из 1,00

Which of the following sorting algorithms for a typical implementation gives the best performance when applied on an array which is sorted or almost sorted?

- a. Insertion sort ✔
- b. Merge sort
- c. Merge
- d. Priority queue

Правильный ответ:
Insertion sort

Вопрос **8**

Частично правильный

Баллов: 0,75 из 1,00

Which of the following do we call the types of algorithms?

- [x] a. Divide and Conquer ✔
- [ ] b. Search algorithms
- [ ] c. Greedy algorithms
- [x] d. Brute Force Solution ✔
- [x] e. Dynamic Programming ✔
- [ ] f. Binary algorithms
- [ ] g. Tree algorithms
- [ ] h. Sorting algorithms

Правильные ответы: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **9**

Неверно

Баллов: 0,00 из 1,00

What is the goal of load tests?

a. test the system resistance in the event of a sudden spike of concurrent users

b. check robustness of a system in case of extreme load ✖

c. determine how the system works under particular load

d. validate that the system is able to handle a given load

Правильный ответ:

validate that the system is able to handle a given load

Вопрос **10**

Неверно

Баллов: 0,00 из 1,00

Which one is an algorithm which recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly?

a. Greedy algorithm

b. Dynamic Programming ✖

c. Big Oh notation

d. Divide and conquer algorithm

Правильный ответ:

Divide and conquer algorithm

Вопрос **11**

Верно

Баллов: 1,00 из 1,00

What of the following is true for array?

- a. We can access any elements anytime with complexity O(1) ✔
- b. We can insert elements at the mid
- c. We can insert elements from both ends
- d. We can easily erase elements from the beginning
- e. We can insert elements only from 1 end

Правильный ответ: We can access any elements anytime with complexity O(1)

Вопрос **12**

Неверно

Баллов: 0,00 из 1,00

Some modification of this algorithms allows us to solve any equation f(x) = 0 if the function f is monotonic.

- a. Thernary Search
- b. Merge Sort ✖
- c. Sieve of Erathosphenes
- d. Binary Search

Правильный ответ: Binary Search

Вопрос **13**

Неверно

Баллов: 0,00 из 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower size solutions.

- a. Dynamic Programming
- b. Brute Force Solution
- c. Search algorithms ✖
- d. Sorting algorithms
- e. Divide and Conquer

Правильный ответ: Dynamic Programming

Вопрос **14**

Частично правильный

Баллов: 0,17 из 1,00

Match the following

amount of virtual memory used	Processor Usage ✖
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage	Private bytes ✔
amount of time disk is busy executing a read or write request	Committed memory ✖
amount of physical memory available to processes on a computer	Bandwidth ✖
shows the bits per second used by a network interface	Memory use ✖
an amount of time processor spends executing non-idle threads	Disk time ✖

Правильный ответ:
amount of virtual memory used → Committed memory,

number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,

amount of time disk is busy executing a read or write request → Disk time,

amount of physical memory available to processes on a computer → Memory use,

shows the bits per second used by a network interface → Bandwidth,

an amount of time processor spends executing non-idle threads → Processor Usage

Вопрос **15**

Неверно

Баллов: 0,00 из 1,00

Which one is an algorithmic technique for solving an optimization problem by breaking it down into simpler subproblems and utilizing the fact that the optimal solution to the overall problem depends upon the optimal solution to its subproblems?

- a. Divide and conquer algorithm ✖
- b. Greedy algorithms
- c. Big Oh notation
- d. Dynamic Programming

Правильный ответ:
Dynamic Programming

Вопрос **16**

Неверно

Баллов: 0,00 из 1,00

Improve and enhance knowledge of the product behavior and technologies in use

- a. analysing data ✖
- b. non functional testing
- c. performance analysis

Правильный ответ:
non functional testing

Вопрос **17**

Неверно

Баллов: 0,00 из 1,00

Which of the following statement(s) is TRUE?

- a. A hash function may give the same hash value for distinct messages.
- b. A hash function takes a message of arbitrary length and generates a fixed length code.
- c. A hash function takes a message of fixed length and generates a code of variable length. ✖

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Вопрос **18**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Manages schedules and activities related to Performance Testing projects

a. Performance Engineering Lead ✔

b. Project Manager

c. Performance Engineer

d. Monitoring Support

Правильный ответ:

Performance Engineering Lead

Вопрос **19**

Неверно

Баллов: 0,00 из 1,00

Dynamic Programming is mainly an optimization over plain recursion.

Выберите один ответ:

- Верно
- Неверно ✖

Правильный ответ: Верно

Вопрос **20**

Неверно

Баллов: 0,00 из 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower size solutions.

- a. Sorting algorithms
- b. Brute Force Solution
- c. Search algorithms
- d. Divide and Conquer
- e. Dynamic Programming ✖

Правильный ответ: Divide and Conquer

Вопрос **21**

Верно

Баллов: 1,00 из 1,00

Performance Testing is a discipline

- a. concerned with analyzing design, diagrams, code and need to quick run
- b. concerned with testing and reporting the current performance of a software application with any diagrams
- c. concerned with testing and reporting the current performance of a software application under various parameters ✔

Правильный ответ:
concerned with testing and reporting the current performance of a software application under various parameters

Вопрос **22**

Неверно

Баллов: 0,00 из 1,00

Which algorithm allows us to find all prime numbers up to given N?

- a. Thernary Search ✖
- b. Merge Sort
- c. Binary Search
- d. Sieve of Erathosphenes

Правильный ответ: Sieve of Erathosphenes

Вопрос **23**

Верно

Баллов: 1,00 из 1,00

What is Linear Programming?

- a. Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities. ✔
- b. The problem is one that asks to list vertices of a digraph in an order such that for every edge of the digraph, the vertex it starts at is listed before the vertex it points to.
- c. - Dynamic programming is a technique for solving problems with overlapping sub-problems

  - Typically, these sub-problems arise from a recurrence relating a solution to a given problem with solutions to its smaller sub-problems of the same type

  - Dynamic programming suggests solving each smaller sub-problem once and recording the results in a table from which a solution to the original problem can be then obtained
- d. Instance simplification is transforming an instance of a problem to an instance of the same problem with some special property that makes the problem easier to solve.

Правильный ответ:
Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Вопрос **24**

Верно

Баллов: 1,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. f2 ,f4, f3, f1
- b. Dynamic programming ✔
- c. False
- d. Incremental approach

Правильный ответ:
Dynamic programming

Вопрос **25**

Неверно

Баллов: 0,00 из 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:

- Верно ✖
- Неверно

Правильный ответ: Неверно

Вопрос **26**

Неверно

Баллов: 0,00 из 1,00

The change making problem can be solved by dynamic programming

Выберите один ответ:

- Верно
- Неверно ✖

Правильный ответ: Верно

Вопрос **27**

Неверно

Баллов: 0,00 из 1,00

What of the following is true for stack?

a. We can insert elements at the mid ✖
b. We can easily erase elements from the beginning
c. We can insert elements from both ends
d. We can access any elements anytime with complexity O(1)
e. We can insert elements only from 1 end

Правильный ответ: We can insert elements only from 1 end

Вопрос **28**

Неверно

Баллов: 0,00 из 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Merge Sort ✖
- b. Binary Search
- c. Thernary Search
- d. Sieve of Erathosphenes

Правильный ответ: Thernary Search

Вопрос **29**

Верно

Баллов: 1,00 из 1,00

What is Non Functional testing?

- a. is defined as a type of Software testing to check non-functional aspects ✔
- b. is defined as a type of Software testing to check whole project parts
- c. It is a testing of hardware and software

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **30**

Верно

Баллов: 1,00 из 1,00

Non-functional testing Parameters, match the following

The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources	Security ✔
The extent to which any software system continuously performs the specified functions without failure	Reliability ✔
The parameter determines the degree to which user can depend on the system during its operation	Availability ✔
The parameter checks that the software system continues to function and recovers itself in case of system failure	Survivability ✔
The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system	Usability ✔
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand	Scalability ✔

Правильный ответ:

The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources → Security,

The extent to which any software system continuously performs the specified functions without failure → Reliability,

The parameter determines the degree to which user can depend on the system during its operation → Availability,

The parameter checks that the software system continues to function and recovers itself in case of system failure → Survivability,

The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system → Usability,

The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand → Scalability

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:39
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:54
Прошло времени	15 мин. 1 сек.
Баллы	29,00/30,00
Оценка	**96,67** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Dynamic programming ✔
- b. Incremental approach
- c. f2 ,f4, f3, f1
- d. False

Правильный ответ:
Dynamic programming

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

In dynamic programming, the technique of storing the previously calculated values is called _____

- a. mapping
- b. storing value property
- c. saving value property
- d. memoization ✔

Правильный ответ:
memoization

Вопрос **3**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Manages schedules and activities related to Performance Testing projects

- a. Project Manager
- b. Monitoring Support
- c. Performance Engineering Lead ✔
- d. Performance Engineer

Правильный ответ:

Performance Engineering Lead

Вопрос **4**

Верно

Баллов: 1,00 из 1,00

What do you mean by "Programming" in the context of Dynamic Programming?

- a. multiplication
- b. Always a least-weight edge
- c. Merge sort
- d. A tabular method ✔

Правильный ответ:
A tabular method

Вопрос **5**

Верно

Баллов: 1,00 из 1,00

How many permutations of elements for set with size N exist? Write without spaces.

Ответ: N! ✔

Правильный ответ: N!

Вопрос **6**

Верно

Баллов: 1,00 из 1,00

Which of the following algorithms has "divide and conquer" type?

- [ ] a. Iterating through permutations
- [ ] b. Sieve of Erathosphenes
- [x] c. Merge Sort ✔
- [x] d. Quick Sort ✔

Правильные ответы: Merge Sort, Quick Sort

Вопрос **7**

Верно

Баллов: 1,00 из 1,00

Match the following

amount of physical memory available to processes on a computer	Memory use ✔
amount of virtual memory used	Committed memory ✔
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage	Private bytes ✔
shows the bits per second used by a network interface	Bandwidth ✔
amount of time disk is busy executing a read or write request	Disk time ✔
an amount of time processor spends executing non-idle threads	Processor Usage ✔

Правильный ответ:
amount of physical memory available to processes on a computer → Memory use,

amount of virtual memory used → Committed memory,

number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,

shows the bits per second used by a network interface → Bandwidth,

amount of time disk is busy executing a read or write request → Disk time,

an amount of time processor spends executing non-idle threads → Processor Usage

Вопрос **8**

Верно

Баллов: 1,00 из 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = ConstNonZero	f(x) = O(g(x))	✔
lim f(x)/g(x) = Infinity	f(x) = Theta(g(x))	✔
lim f(x)/g(x) = 0	f(x) = o(g(x))	✔

Правильный ответ: lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x)), lim f(x)/g(x) = 0 → f(x) = o(g(x))

Вопрос **9**

Верно

Баллов: 1,00 из 1,00

Performance Engineering is the process

- a. by which software should be runned
- b. by which software is analyzed and will work faster
- c. by which software is tested and tuned with the intent of realizing the required performance ✔

Правильный ответ:
by which software is tested and tuned with the intent of realizing the required performance

Вопрос **10**

Верно

Баллов: 1,00 из 1,00

Match the following

Load testing ✔	checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks befo
Stress testing ✔	involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to
Spike testing ✔	tests the software's reaction to sudden large spikes in the load generated by users
Endurance testing ✔	is done to make sure the software can handle the expected load over a long period of time

Правильный ответ:
Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live,

Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application,

Spike testing → tests the software's reaction to sudden large spikes in the load generated by users,

Endurance testing → is done to make sure the software can handle the expected load over a long period of time

Вопрос **11**

Верно

Баллов: 1,00 из 1,00

What of the following is true for stack?

- a. We can insert elements from both ends
- b. We can insert elements only from 1 end ✔
- c. We can access any elements anytime with complexity O(1)
- d. We can easily erase elements from the beginning
- e. We can insert elements at the mid

Правильный ответ: We can insert elements only from 1 end

Вопрос **12**

Верно

Баллов: 1,00 из 1,00

What is the complexity of merge sort algorithm? Write without spaces, array size N.

Ответ: O(Nlog(N)) ✔

Правильный ответ: O(NlogN)

Вопрос **13**

Верно

Баллов: 1,00 из 1,00

What of the following is true for array?

- a. We can access any elements anytime with complexity O(1) ✔
- b. We can insert elements at the mid
- c. We can insert elements only from 1 end
- d. We can insert elements from both ends
- e. We can easily erase elements from the beginning

Правильный ответ: We can access any elements anytime with complexity O(1)

Вопрос **14**

Верно

Баллов: 1,00 из 1,00

An algorithm's execution time is related to the number of _____ it requires

- a. data fields
- b. test data sets
- c. parameters
- d. operations ✔

Правильный ответ:
operations

Вопрос **15**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Supports performance test execution as configuration or application issues are found

- a. Application Support ✔
- b. Project Manager
- c. Monitoring Support
- d. Performance Engineering Lead

Правильный ответ:
Application Support

Вопрос **16**

Верно

Баллов: 1,00 из 1,00

With all equal-sized intervals, a greedy algorithm based on earliest start time will always select the maximum number of compatible intervals

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **17**

Верно

Баллов: 1,00 из 1,00

An algorithm is a well-defined sequence of steps used to solve a well-defined problem in finite time

Выберите один ответ:

- (•) Верно ✔
- ( ) Неверно

Правильный ответ: Верно

Вопрос **18**

Верно

Баллов: 1,00 из 1,00

Which is NOT an example of Non-functional requirements?

- (•) a. Request Utilization ✔
- ( ) b. The number of users handled by the application
- ( ) c. Page response time
- ( ) d. CPU Utilization

Правильный ответ:

Request Utilization

Вопрос **19**

Верно

Баллов: 1,00 из 1,00

What is the goal of stress testing?

- a. determine how the system works under particular load
- b. check robustness of a system in case of extreme load ✔
- c. test the system resistance in the event of a sudden spike of concurrent users
- d. validate that the system is able to handle a given load

Правильный ответ:

check robustness of a system in case of extreme load

Вопрос **20**

Верно

Баллов: 1,00 из 1,00

Performance Testing Process

- a. Design project, analyze system, run code
- b. Identify testing environment, run project, making desing
- c. Identify testing environment, plan performance tests, analyze, tune and retest ✔
- d. Plan performance tests, solveig algorithms, run code

Правильный ответ:
Identify testing environment, plan performance tests, analyze, tune and retest

Вопрос **21**

Верно

Баллов: 1,00 из 1,00

Which one is the definition of NFT?

- a. prepares for performance test execution, executes performance test and analyze it
- b. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.
- c. type of testing of Software to check non-functional aspects ✔
- d. programming code specific to performance testing to automate the real-world user behavior

Правильный ответ:

type of testing of Software to check non-functional aspects

Вопрос **22**

Верно

Баллов: 1,00 из 1,00

One of the simplest collision resolution technique is called

- a. discovered
- b. chaining ✔
- c. collision
- d. True

Правильный ответ:
chaining

Вопрос **23**

Неверно

Баллов: 0,00 из 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:

- Верно ✖
- Неверно

Правильный ответ: Неверно

Вопрос **24**

Верно

Баллов: 1,00 из 1,00

Type of Software Testing

- a. Non functional, maintenance
- b. Functional, non functional
- c. Analyzing, rateing, maintenance
- d. Functional, non functional, maintenance ✔

Правильный ответ:
Functional, non functional, maintenance

Вопрос **25**

Верно

Баллов: 1,00 из 1,00

The basic parameters monitored during performance testing include - Processor Usage

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **26**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Prepares for performance test execution, executes performance tests, analyzes performance tests, and tracks problem reports

- a. Monitoring Support
- b. Project Manager
- c. Performance Engineer ✔
- d. Performance Engineering Lead

Правильный ответ:
Performance Engineer

Вопрос **27**

Верно

Баллов: 1,00 из 1,00

Which one is an approach for solving a problem by selecting the best option available at the moment

- a. Dynamic Programming
- b. Greedy algorithm ✔
- c. Big Oh notation
- d. Divide and conquer algorithm

Правильный ответ:
Greedy algorithm

Вопрос **28**

Верно

Баллов: 1,00 из 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **29**

Верно

Баллов: 1,00 из 1,00

What is Non Functional testing?

- a. is defined as a type of Software testing to check whole project parts
- b. It is a testing of hardware and software
- c. is defined as a type of Software testing to check non-functional aspects ✔

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **30**

Верно

Баллов: 1,00 из 1,00

Which does NOT belong to testing methodology?

- a. analyzing of test results
- b. analyzing of simulation ✔
- c. recording a simulation
- d. running the simulation in a large scale

Правильный ответ:

analyzing of simulation

◄ preparation for final

Перейти на...

week 1 tasks ►

Software Performance Analysis | Sadykova Zuleikha

Начат среда, 15 апреля 2026, 08:44
Состояние Завершено
Завершен среда, 29 июня 2026, 09:53
Прошло 4 мес. 13 сек.
Баллы 100,00 / 100,00
Оценка 95,55 из 100,00

Навигация по тесту

Показать одну страницу
Закончить обзор

Вопрос 1 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Which one is the definition of Performance Engineer?

a. programming code specific to performance testing to automate the real-world user behavior

b. prepares for performance test execution, executes performance test and analyze it ✓

c. set to tools and strategies which are applied by any software, program, application, or API, to correct any flaws

d. type of testing of Software to check non-functional aspects

Правильный ответ:
prepares for performance test execution, executes performance test and analyze it

Вопрос 2 Верно Баллов: 1,00 из 1,00 Отметить вопрос

What of the following is true for array?

a. We can easily erase elements from the beginning
b. We can insert elements only from f end
c. We can access any elements anytime with complexity O(1)✓
d. We can insert elements at the end
e. We can insert elements from both ends

Правильный ответ: We can access any elements anytime with complexity O(1)

Вопрос 3 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Binary search is a very efficient algorithm for searching in a _____ array. It is a principal example of a 2_____ algorithm. Same with identifying a lake cure with a balance score and Russian present multiplication.

1. 1. sorted ✓
2. decrease by a constant factor

a. Directed Acyclic Graph is a graph with no cycles
b. 1. Marshall's
2. Floyd's
c. Euclid's algorithm, Interpolation search, Nim... etc

Правильный ответ:
1. sorted
2. decrease by a constant factor

Вопрос 4 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Array located in dynamic memory?

a. Dynamic array✓
b. vector
c. Dynamic object
d. Allocated array
e. Pointer

Правильный ответ: Dynamic array

Вопрос 5 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Match the following

an amount of time processor spends executing non-idle threads — Processor Usage
Number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage — Private bytes
amount of time disk is busy executing a read or write request — Disk time
shows the bits per second used by a network interface — Bandwidth
amount of physical memory available to processes on a computer — Memory use
amount of virtual memory used — Committed memory

Правильный ответ:
an amount of time processor spends executing non-idle threads → Processor Usage,
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,
amount of time disk is busy executing a read or write request → Disk time,
shows the bits per second used by a network interface → Bandwidth,
amount of physical memory available to processes on a computer → Memory use,
amount of virtual memory used → Committed memory.

Вопрос 6 Верно Баллов: 1,00 из 1,00 Отметить вопрос

The change making problem can be solved by dynamic programming

Выберите один или:
- Верно ✓
- Неверно

Правильный ответ: Верно

Вопрос 7 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Which one is an approach for solving a problem by selecting the best option available at the moment

a. Divide-and-conquer algorithm
b. Dynamic Programming
c. Big-Oh notation
d. Greedy algorithm✓

Правильный ответ:
Greedy algorithm

Вопрос 8 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Choose which functional role best describes responsibility: Manages schedules and activities related to Performance Testing projects

a. Performance Engineering Lead ✓
b. Vendoring Support
c. Project Manager
d. Performance Engineer

Правильный ответ:
Performance Engineering Lead

Вопрос 9 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Quick sort, like merge sort, applies the

a. divide-and-conquer paradigm✓
b. minimum of any edge satisfying the property
c. always a least weight edge
d. gives us an upper bound on the running time for any input

Правильный ответ:
divide-and-conquer paradigm

Вопрос 10 Неверно Баллов: 1,00 из 1,00 Отметить вопрос

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower size subsets.

a. Divide and Conquer
b. Dynamic Programming✗
c. Brute Force Solution
d. Sorting algorithms
e. Search algorithms

Правильный ответ: Divide and Conquer

Вопрос 11 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Types of Performance Testing

a. Spike, stress, issue testing
b. Price, speed, level testing
c. Nexus, price, function testing
d. Load, stress, spike testing✓

Правильный ответ:
Load, stress, spike testing

Вопрос 12 Верно Баллов: 1,00 из 1,00 Отметить вопрос

What do you mean by "Programming" in the context of Dynamic Programming?

a. Always a least weight edge
b. A tabular method✓
c. Merge sort
d. multiplication

Правильный ответ:
A tabular method

Вопрос 13 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Non-functional testing Parameters, match the following

flexibility — The term refers to the ease with which the application can work in different hardware and software configurations
portability — The flexibility of software to transfer from its current hardware or software environment.
interoperability — This non-functional parameter checks a software system interfaces with other software systems.
efficiency — The extent to which any software system can handles capacity, quantity and response time

Правильный ответ:
flexibility → The term refers to the ease with which the application can work in different hardware and software configurations,
portability → The flexibility of software to transfer from its current hardware or software environment.,
interoperability → This non-functional parameter checks a software system interfaces with other software systems.,
efficiency → The extent to which any software system can handles capacity, quantity and response time

Вопрос 14 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Choose non-functional aspects

a. speed, response time, stability
b. reliability, scalability, and resource usage
c. performance, usability, reliability✓
d. performance, speed, design

Правильный ответ:
performance, usability, reliability

Вопрос 15 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Which one is an algorithmic technique for solving an optimization problem by breaking it down into simpler subproblems and utilizing the fact that the optimal solution to the overall problem depends upon the optimal solution to its subproblems?

a. Dynamic Programming✓
b. Greedy algorithms
c. Divide and conquer algorithm
d. Big-Oh notation

Правильный ответ:
Dynamic Programming

Вопрос 16 Верно Баллов: 1,00 из 1,00 Отметить вопрос

In the merge-sort execution tree, the cost of operations done at each level of the tree is different.

Выберите один или:
- Верно
- Неверно ✓

Правильный ответ: Неверно

Вопрос 17 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Dynamic Programming is mainly an optimization over plain recursion.

Выберите один или:
- Верно ✓
- Неверно

Правильный ответ: Верно

Вопрос 18 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Type of Software Testing

a. Functional, non functional, maintenance✓
b. Functional, non functional
c. Non functional, maintenance
d. Analyzing, testing, maintenance

Правильный ответ:
Functional, non functional, maintenance

Вопрос 19 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Which is NOT an example of Non-functional requirements?

a. The number of users handled by the application
b. Page response time
c. Request Utilization ✓
d. CPU Utilization

Правильный ответ:
Request Utilization

Вопрос 20 Верно Баллов: 1,00 из 1,00 Отметить вопрос

On that device the static memory is located.

a. CPU
b. GPU
c. Hard Drive
d. Memory✓
e. ASIC✓

Правильный ответ: RAM

Вопрос 21 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Performance Testing Process

a. Identify testing environment, run project, making dashing
b. Plan performance tests, solving algorithms, run code
c. Identify testing environment, plan performance tests, analyze, tune and retest✓
d. Design project, analyze system, run code

Правильный ответ:
Identify testing environment, plan performance tests, analyze, tune and retest

Вопрос 22 Верно Баллов: 1,00 из 1,00 Отметить вопрос

How many permutations of elements for set with size N exist? Write without spaces.

Ответ: N! ✓

Правильный ответ: N!

Вопрос 23 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Which are part of the steps at each level of recursion?

a. combine
b. divide
c. all of the above✓
d. conquer

Правильный ответ:
all of the above

Вопрос 24 Верно Баллов: 1,00 из 1,00 Отметить вопрос

The following pseudo-code is used to find the solution of the problem in minimum time. Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K.

1. 12, 34, 11, 9
2. False
3. Dynamic programming✓
4. Incremental approach

Правильный ответ:
Dynamic programming

Вопрос 25 Верно Баллов: 1,00 из 1,00 Отметить вопрос

An algorithm is a well-defined sequence of steps used to solve a well-defined problem in finite time

Выберите один или:
- Верно
- Неверно ✗

Правильный ответ: Верно

Вопрос 26 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Improve and enhance knowledge of the product behavior and technologies in use

a. analyzing data
b. non functional testing✓
c. performance analysis

Правильный ответ:
non functional testing

Вопрос 27 Верно Баллов: 1,00 из 1,00 Отметить вопрос

What is the height of full binary tree if the total number of elements in it is N? Write in O-notation without spaces.

Ответ: O(log(N)) ✓

Правильный ответ: O(log(N))

Вопрос 28 Верно Баллов: 1,00 из 1,00 Отметить вопрос

If we divide at very into groups of 3, find the median of each group, recursively find the median of those medians, partition, and recurse, then we can achieve linear-time median finding algorithm

Выберите один или:
- Верно
- Неверно ✓

Правильный ответ: Неверно

Вопрос 29 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Some modification of this algorithms allows us to solve any equation f(x) = 0 if the function f is monotonic.

a. Thorium Search
b. Binary Search✓
c. Merge Sort
d. Sieve of Eratosthenes

Правильный ответ: Binary Search

Вопрос 30 Верно Баллов: 1,00 из 1,00 Отметить вопрос

Performance Testing is a discipline

a. concerned with testing and reporting the current performance of a software application with any diagrams
b. concerned with analyzing design, diagrams, code and need to quick run
c. concerned with testing and reporting the current performance of a software application under various parameters ✓

Правильный ответ:
concerned with testing and reporting the current performance of a software application under various parameters

Вы вошли под именем Zuleikha Sadykova
Software Performance Analysis
Сбросить изменения сессии
Сменить настроенные пользователей

Software Performance Analysis | Sadykova Zuleikha
Software Performance Analysis | Sadykova Zuleikha
Учебные планы
Университет
Университет
Обзор
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Week 13
Week 14
Week 15
Week 16
Week 17
Week 18

Software Performance Analysis | Sadykova Zuleikha

Текущее время	Среда, 21 Июй 2022, 09:49
Состояние	Завершено
Завершено	Среда, 21 Июй 2022, 09:55
Затраченное время	5 мин.
Оценка	20 из 20
Баллы	21,0 из 22,00
Отзыв	Well done!

Перейдите по тесту

Review your attempt
Пересмотр всех ответов

Question **1**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

What are part of the steps at each level of recursion?

1. a. conquer
2. b. all of the above
3. c. divide
4. d. combine

Правильный ответ:
all of the above

Question **2**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

What is the goal of soak testing?

1. a. check robustness of a system in case of extreme load
2. b. validate that the system is able to handle a given load
3. c. test the system resistance in the event of a sudden spike of concurrent users
4. d. determine how the system works under particular load

Правильный ответ:
determine how the system works under particular load

Question **3**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Binary search is a very efficient algorithm for searching in a ____-array. It is a divide-and-conquer ____ algorithm. Binary search works by identifying a item sort with a sorted array and then repeatedly present halfsplitting.

1. a. Mainhalf's
2. b. Finally
3. c. Euclid's algorithm, interpolation search, Nim, , etc
4. d. Elements Equals Single in a graph with no cycles
5. e. sorted
6. f. decrease by a constant factor

Правильный ответ:
1. sorted
2. decrease by a constant factor

Question **4**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Which of the following statement(s) is TRUE?

1. a. A hash function takes a message of arbitrary length and generates a fixed length code.
2. b. A hash function may give the same hash value for distinct messages.
3. c. A hash function takes a message of fixed length and generates a code of variable length.

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Question **5**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

The following paradigm can be used to find the solution of the problem in minimum time. Let there are two jobs to be done, job1 and job2. Let time required to finish job1 and job2 of the given job with cost equal to 8.

1. a. I2, I4, I5, I7
2. b. Dynamic programming
3. c. False
4. d. Incremental approach

Правильный ответ:
Dynamic programming

Question **6**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

How do we denote following formulas while (in limit x tending to infinity)

Ex:fx(x)gx = infinity | fx(x) = O(gx) ✓ | fx(x) = o(gx) ✓
Ex:fx(x)gx = Constant(factor) | fx(x) = Theta(gx) ✓ | fx(x) = o(gx) ✓
Ex:fx(x)gx = 0 | fx(x) = O(gx) ✓ | fx(x) = o(gx) ✓

Правильный ответ: Ex:fx(x)gx = infinity → fx = Theta(gx); Ex:fx(x)gx = Constant(factor) → fx = O(gx); Ex:fx(x)gx = 0 → fx = o(gx)

Question **7**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Which one is the definition of Performance Test Script?

1. a. type of testing of Software to check non functional aspects
2. b. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws
3. c. programming code specific to performance testing to automate the real world user behavior
4. d. prepare for performance test execution, execution performance test and analysis ✓

Правильный ответ:
programming code specific to performance testing to automate the real world user behavior

Question **8**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

How do we denote constant complexity with O notation? Write without spaces.

Ответ: 1(O1) ✓

Правильный ответ: O(1)

Question **9**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Which one is the definition of Performance Testing?

1. a. prepare for performance test execution, execution performance test and analysis ✓
2. b. programming code specific to performance testing to automate the real world user behavior
3. c. type of testing of Software to check non functional aspects
4. d. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws

Правильный ответ:
set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws

Question **10**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

What is the time complexity of the bruce force algorithm used to find the longest common subsequence?

1. a. O(n3)
2. b. O(n2)
3. c. O(2n)
4. d. O(n)

Правильный ответ:
O(2n)

Question **11**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

How many permutations of elements for set with size N exist? Write without spaces.

Ответ: N! ✓

Правильный ответ: N!

Question **12**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

The problem of weighted interval scheduling can be solved in O(n log n) time using dynamic programming.

Выберите один ответ:
- Верно ✓
- Неверно

Правильный ответ: Верно

Question **13**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

The running time of an algorithm is the number of instructions it executes when run on a particular instance.

Выберите один ответ:
- Верно ✓
- Неверно

Правильный ответ: Верно

Question **14**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

What will be the output?

```
#include <iostream>
using namespace std;
int fib(int n);
int main()
{
    int n = 5;
    cout << fib(n);
    return 0;
}
int fib(int n)
{
    if (n <= 1)
        return n;
    else if (n == 2)
        return 1;
    else
        return fib(n - 1) + fib(n - 2);
}
int sum (int *)
{
    int n = 5;
    cout << "Hello";
    return n;
}
```

1. a. 1
2. b. 55
3. c. 16
4. d. 0
5. e. 5,4*

Правильный ответ:
5

Question **15**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Performance Engineering aims are to optimize the most important application performance test in an experiment.

Выберите один ответ:
- Верно ✓
- Неверно

Правильный ответ: Верно

Question **16**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

An algorithm's execution time is related to the number of ____ it requires.

1. a. parameters
2. b. text data sets
3. c. operations
4. d. data fields ✓

Правильный ответ:
operations

Question **17**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Performance Engineering is the process

1. a. by which software is analyzed and will work faster
2. b. by which software should be turned
3. c. by which software is tested and tweaked with the intent of realizing the required performance ✓

Правильный ответ:
by which software is tested and tweaked with the intent of realizing the required performance

Question **18**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

What of the following is true for swap?

1. a. We can insert elements at the mid
2. b. We can easily erase elements from the beginning
3. c. We can insert elements only from 1 side*
4. d. We can erase elements from both sides
5. e. We can access any elements anytime with complexity O(1)

Правильный ответ:
We can insert elements only from 1 side*, We can access any elements anytime with complexity O(1), We can erase elements from both sides, We can insert elements at the mid

Question **19**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

What of the following is true for list?

1. a. We can insert elements at the mid*
2. b. We can access any elements anytime with complexity O(1)
3. c. We can erase elements from both sides
4. d. We can insert elements only from 1 side

Правильный ответ:
We can insert elements at the mid*, We can access any elements anytime with complexity O(1), We can erase elements from both sides, We can insert elements only from 1 side

Question **20**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Match the following:

amount of physical memory available to processes on a computer	Выберите...
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage.	Выберите...
amount of virtual memory used	Выберите...
amount of time data is being executed by a read or write request	Выберите...
shows the bits per second (used) by a network interface	Выберите...
an amount of time processor spends executing non-idle threads	Выберите...

Правильный ответ:
amount of physical memory available to processes on a computer → Memory; number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage. → Private bytes; amount of virtual memory used → Commit bytes; amount of time data is being executed by a read or write request → Disk time; shows the bits per second (used) by a network interface → Network bytes; an amount of time processor spends executing non-idle threads → Processor Usage

Question **21**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

What is the goal of load tests?

1. a. validate that the system is able to handle a given load ✓
2. b. test the system resistance in the event of a sudden spike of concurrent users
3. c. determine how the system works under particular load
4. d. check robustness of a system in case of extreme load

Правильный ответ:
validate that the system is able to handle a given load

Question **22**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in the case of algorithms we saw above for linear sub-sections.

1. a. Search algorithms
2. b. Greedy algorithms
3. c. Brute force search
4. d. Sorting algorithms
5. e. Dynamic Programming ✓

Правильный ответ: Dynamic Programming

Question **23**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

The basic parameters monitored during performance testing include: - Processor Usage

Выберите один ответ:
- Верно ✓
- Неверно

Правильный ответ: Верно

Question **24**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Array located in dynamic memory?

1. a. Dynamic array ✓
2. b. vector
3. c. Allocated array
4. d. Pointer
5. e. Dynamic object

Правильный ответ: Dynamic array

Question **25**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Match the following:

Scalability	Determine maximum user load the software application can handle.
Reliability	Determine if the application is stable under varying loads
Speed	Determine whether the application responds quickly

Правильный ответ:
Scalability → Determine maximum user load the software application can handle.; Reliability → Determine if the application is stable under varying loads.; Speed → Determine whether the application responds quickly.

Question **26**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Which algorithm allows us to find the minimum point in array that first decreases and the greater

1. a. Merge Sort
2. b. Sieve of Eratosthenes ✓
3. c. Tiernary Search
4. d. Binary Search

Правильный ответ: Tiernary Search

Question **27**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Choose which functional role best describes responsibility: Prepares for performance test execution, executes performance tests, analyzes performance tests, and tracks problem reports

1. a. Project Manager
2. b. Monitoring Support
3. c. Performance Engineering Lead
4. d. Performance Engineer ✓

Правильный ответ:
Performance Engineer

Question **28**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

An algorithm is a well defined sequence of steps used to solve a well defined problem in finite time

Выберите один ответ:
- Верно ✓
- Неверно

Правильный ответ: Верно

Question **29**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

Non functional testing Parameters, match the following

The parameter defines how a system is safeguarded against malicious attacks from internal and external sources. → Security	Выберите...
The parameter determines the degree to which user can depend on the system during its operation	Выберите...
The parameter defines the ease with which any software application can be tested, demonstrating the degree to which an increase in demand	Выберите...
The parameter checks that the software system continues to function and recovers itself in case of system failure	Выберите...
The ease with which the user can learn, operate, prepare inputs and interpret outputs of a software system	Выберите...
The extent to which any software system continuously performs the specified functions without failure	Выберите...

Правильный ответ:
The parameter defines how a system is safeguarded against malicious attacks from internal and external sources. → Security; The parameter determines the degree to which user can depend on the system during its operation → Reliability; The term refers to the degree to which any software application can be tested, demonstrating the degree to which an increase in demand → Scalability; The parameter checks that the software system continues to function and recovers itself in case of system failure → Survivability; The ease with which the user can learn, operate, prepare inputs and interpret outputs of a software system → Usability; The extent to which any software system continuously performs the specified functions without failure → Reliability

Question **30**
Верно
Баллы: 1,00 из 1,00
Отметить вопрос

One of the simplest collision resolution technique is called

1. a. discovered
2. b. chaining*
3. c. collision
4. d. True

Правильный ответ:
chaining

Вы вошли под именем [redacted]
Сводка данных журнала
Скачать мобильное приложение

Тест начат	Среда, 25 Май 2022, 00:56
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:58
Прошло времени	2 мин. 42 сек.
Баллы	17,00/30,00
Оценка	**56,67** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

Which one is the definition of Performance Test Script?

a. type of testing of Software to check non-functional aspects

b. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.

c. prepares for performance test execution, executes performance test and analyze it

d. programming code specific to performance testing to automate the real-world user behavior ✔

Правильный ответ:

programming code specific to performance testing to automate the real-world user behavior

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

a. Incremental approach

b. False

c. f2 ,f4, f3, f1

d. Dynamic programming ✔

Правильный ответ:
Dynamic programming

Вопрос **3**

Нет ответа

Балл: 1,00

What is the complexity of quick sort algorithm in worst case? Write without spaces, array size N.

Ответ: ✖

Правильный ответ: O(N N)

Вопрос **4**

Неверно

Баллов: 0,00 из 1,00

Which one is incorrect performance test case?

- a. Check the maximum number of users that the application can handle before it crashes
- b. Verify design of the application, is it easy to use
- c. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
- d. Check database execution time when 500 records are read/written simultaneously
- e. Verify response time is not more than 4 secs when 1000 users access the website simultaneously
- f. Check CPU and memory usage of the application and the database server under peak load conditions ✖

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **5**

Верно

Баллов: 1,00 из 1,00

The running time of an algorithm is the number of instructions it executes when run on a particular instance

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **6**

Верно

Баллов: 1,00 из 1,00

Which one is the definition of NFT?

- a. type of testing of Software to check non-functional aspects ✔
- b. programming code specific to performance testing to automate the real-world user behavior
- c. prepares for performance test execution, executes performance test and analyze it
- d. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.

Правильный ответ:

type of testing of Software to check non-functional aspects

Вопрос **7**

Верно

Баллов: 1,00 из 1,00

Which of the following do we call the types of algorithms?

- [x] a. Brute Force Solution ✔
- [x] b. Divide and Conquer ✔
- [ ] c. Search algorithms
- [x] d. Dynamic Programming ✔
- [ ] e. Sorting algorithms
- [ ] f. Tree algorithms
- [ ] g. Binary algorithms
- [x] h. Greedy algorithms ✔

Правильные ответы: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **8**

Нет ответа

Балл: 1,00

How many permutations of elements for set with size N exist? Write without spaces.

Ответ: ✖

Правильный ответ: N!

Вопрос **9**

Нет ответа

Балл: 1,00

What is the complexity of merge sort algorithm? Write without spaces, array size N.

Ответ: ✖

Правильный ответ: O(NlogN)

Вопрос **10**

Неверно

Баллов: 0,00 из 1,00

Memory that is allocated by program at the runtime by requesting from OS?

- a. RAM
- b. Heap
- c. Static Memory ✖
- d. Hash
- e. Dynamic Memory

Правильный ответ: Dynamic Memory

Вопрос **11**

Верно

Баллов: 1,00 из 1,00

Which of the following statement(s) is TRUE?

- a. A hash function takes a message of arbitrary length and generates a fixed length code. ✔
- b. A hash function takes a message of fixed length and generates a code of variable length.
- c. A hash function may give the same hash value for distinct messages.

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Вопрос **12**

Верно

Баллов: 1,00 из 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower size solutions.

- a. Dynamic Programming
- b. Sorting algorithms
- c. Divide and Conquer ✔
- d. Search algorithms
- e. Brute Force Solution

Правильный ответ: Divide and Conquer

Вопрос **13**

Верно

Баллов: 1,00 из 1,00

Which algorithm allows us to find all prime numbers up to given N?

- a. Sieve of Erathosphenes ✔
- b. Thernary Search
- c. Binary Search
- d. Merge Sort

Правильный ответ: Sieve of Erathosphenes

Вопрос **14**

Верно

Баллов: 1,00 из 1,00

Performance Testing - is a software testing process used for testing the speed, response time, stability, reliability, scalability and resource usage of a software application under particular workload.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **15**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Prepares for performance test execution, executes performance tests, analyzes performance tests, and tracks problem reports

a. Monitoring Support

b. Project Manager

c. Performance Engineer ✔

d. Performance Engineering Lead

Правильный ответ:
Performance Engineer

Вопрос **16**

Верно

Баллов: 1,00 из 1,00

If a problem can be solved by combining optimal solutions to non-overlapping problems, the strategy is called _____

a. recursion

b. divide and conquer ✔

c. dynamic programming

d. iteration

e. greedy

Правильный ответ:
divide and conquer

Вопрос **17**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Monitors performance tests using Performance monitors

a. Project Manager

b. Performance Engineering Lead

c. Performance Engineer

d. Monitoring Support ✔

Правильный ответ:
Monitoring Support

Вопрос **18**

Верно

Баллов: 1,00 из 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

a. big O ✔

b. small omega

c. big theta

d. big omega

Правильный ответ:
big O

Вопрос **19**

Нет ответа

Балл: 1,00

What is the height of full binary tree if the total number of elements in it is N? Write in O notation without spaces. ✖ .

Правильный ответ: O(log(N))

Вопрос **20**

Верно

Баллов: 1,00 из 1,00

What do you mean by "Programming" in the context of Dynamic Programming?

- a. Merge sort
- b. Always a least-weight edge
- c. multiplication
- d. A tabular method ✔

Правильный ответ:
A tabular method

Вопрос **21**

Неверно

Баллов: 0,00 из 1,00

Scalability testing is done to make sure the software can handle the expected load over a long period of time

Выберите один ответ:

- Верно ✖
- Неверно

Правильный ответ: Неверно

Вопрос **22**

Верно

Баллов: 1,00 из 1,00

In the potential method for amortized analysis, the potential energy should never go negative

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **23**

Неверно

Баллов: 0,00 из 1,00

Performance Testing Process

- a. Identify testing environment, plan performance tests, analyze, tune and retest
- b. Identify testing environment, run project, making desing
- c. Plan performance tests, solveig algorithms, run code ✖
- d. Design project, analyze system, run code

Правильный ответ:
Identify testing environment, plan performance tests, analyze, tune and retest

Вопрос **24**

Нет ответа

Балл: 1,00

Match the following

an amount of time processor spends executing non-idle threads	Выберите...
amount of time disk is busy executing a read or write request	Выберите...
amount of physical memory available to processes on a computer	Выберите...
amount of virtual memory used	Выберите...
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage	Выберите...
shows the bits per second used by a network interface	Выберите...

Правильный ответ:
an amount of time processor spends executing non-idle threads → Processor Usage,

amount of time disk is busy executing a read or write request → Disk time,

amount of physical memory available to processes on a computer → Memory use,

amount of virtual memory used → Committed memory,

number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,

shows the bits per second used by a network interface → Bandwidth

Вопрос **25**

Неверно

Баллов: 0,00 из 1,00

What is the goal of soak testing?

- a. determine how the system works under particular load
- b. check robustness of a system in case of extreme load ✖
- c. validate that the system is able to handle a given load
- d. test the system resistance in the event of a sudden spike of concurrent users

Правильный ответ:

determine how the system works under particular load

Вопрос **26**

Верно

Баллов: 1,00 из 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

- a. Divide and conquer
- b. Dynamic Programming
- c. Big Oh notation ✔
- d. Greedy algorithm

Правильный ответ:
Big Oh notation

Вопрос **27**

Нет ответа

Балл: 1,00

Non-functional testing Parameters, match the following

The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand	Выберите...
The extent to which any software system continuously performs the specified functions without failure	Выберите...
The parameter determines the degree to which user can depend on the system during its operation	Выберите...
The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system	Выберите...
The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources	Выберите...
The parameter checks that the software system continues to function and recovers itself in case of system failure	Выберите...

Правильный ответ:
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand → Scalability,

The extent to which any software system continuously performs the specified functions without failure → Reliability,

The parameter determines the degree to which user can depend on the system during its operation → Availability,

The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system → Usability,

The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources → Security,

The parameter checks that the software system continues to function and recovers itself in case of system failure → Survivability

Вопрос **28**

Верно

Баллов: 1,00 из 1,00

A dynamic-programming algorithm solves each sub-problem just once and then saves its answer in a table, thereby avoiding the work of recomputing the answer every time it solves each sub problem.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **29**

Неверно

Баллов: 0,00 из 1,00

What is the goal of load tests?

a. determine how the system works under particular load ✖

b. check robustness of a system in case of extreme load

c. test the system resistance in the event of a sudden spike of concurrent users

d. validate that the system is able to handle a given load

Правильный ответ:

validate that the system is able to handle a given load

Вопрос **30**

Неверно

Баллов: 0,00 из 1,00

An algorithm's execution time is related to the number of _____ it requires

a. parameters

b. data fields ✖

c. operations

d. test data sets

Правильный ответ:
operations

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:16
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:28
Прошло времени	11 мин. 57 сек.
Баллы	26,00/30,00
Оценка	**86,67** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

On that device the static memory is located.

- a. GPU
- b. RAM ✔
- c. CPU
- d. Hard Drive
- e. Processor

Правильный ответ: RAM

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

The running time of an algorithm is the number of instructions it executes when run on a particular instance

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **3**

Верно

Баллов: 1,00 из 1,00

In the potential method for amortized analysis, the potential energy should never go negative

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **4**

Верно

Баллов: 1,00 из 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Merge Sort
- b. Sieve of Erathosphenes
- c. Thernary Search ✔
- d. Binary Search

Правильный ответ: Thernary Search

Вопрос **5**

Верно

Баллов: 1,00 из 1,00

What is Non Functional testing?

- a. is defined as a type of Software testing to check non-functional aspects ✔
- b. is defined as a type of Software testing to check whole project parts
- c. It is a testing of hardware and software

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **6**

Верно

Баллов: 1,00 из 1,00

Dynamic programming can be applied to common problems like

- a. Coin change problem: from a limited set of coins build a specified amount of change
- b. All of the above ✔
- c. Finding if a word can be built from a set of strings
- d. None of them
- e. Fibonacci problems
- f. Assembly line scheduling

Правильный ответ:
All of the above

Вопрос **7**

Верно

Баллов: 1,00 из 1,00

Which one is the definition of Performance Testing?

- a. programming code specific to performance testing to automate the real-world user behavior
- b. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws ✔
- c. type of testing of Software to check non-functional aspects
- d. prepares for performance test execution, executes performance test and analyze it

Правильный ответ:

set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws

Вопрос **8**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Supports performance test execution as configuration or application issues are found

- a. Application Support ✔
- b. Performance Engineering Lead
- c. Monitoring Support
- d. Project Manager

Правильный ответ:
Application Support

Вопрос **9**

Верно

Баллов: 1,00 из 1,00

Which of the following do we call the types of algorithms?

- a. Dynamic Programming ✔
- b. Brute Force Solution ✔
- c. Search algorithms
- d. Greedy algorithms ✔
- e. Divide and Conquer ✔
- f. Binary algorithms
- g. Tree algorithms
- h. Sorting algorithms

Правильные ответы: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **10**

Верно

Баллов: 1,00 из 1,00

What of the following is true for array?

- a. We can insert elements from both ends
- b. We can access any elements anytime with complexity O(1) ✔
- c. We can insert elements at the mid
- d. We can easily erase elements from the beginning
- e. We can insert elements only from 1 end

Правильный ответ: We can access any elements anytime with complexity O(1)

Вопрос **11**

Верно

Баллов: 1,00 из 1,00

What is Linear Programming?

- a. - Dynamic programming is a technique for solving problems with overlapping sub-problems

  - Typically, these sub-problems arise from a recurrence relating a solution to a given problem with solutions to its smaller sub-problems of the same type

  - Dynamic programming suggests solving each smaller sub-problem once and recording the results in a table from which a solution to the original problem can be then obtained
- b. Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities. ✔
- c. Instance simplification is transforming an instance of a problem to an instance of the same problem with some special property that makes the problem easier to solve.
- d. The problem is one that asks to list vertices of a digraph in an order such that for every edge of the digraph, the vertex it starts at is listed before the vertex it points to.

Правильный ответ:
Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Вопрос **12**

Верно

Баллов: 1,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. f2 ,f4, f3, f1
- b. False
- c. Dynamic programming ✔
- d. Incremental approach

Правильный ответ:
Dynamic programming

Вопрос **13**

Верно

Баллов: 1,00 из 1,00

Match the following

Scalability	Determines maximum user load the software application can handle	✔
Speed	Determines whether the application responds quickly	✔
Stability	Determines if the application is stable under varying loads	✔

Правильный ответ:
Scalability → Determines maximum user load the software application can handle,

Speed → Determines whether the application responds quickly,

Stability → Determines if the application is stable under varying loads

Вопрос **14**

Верно

Баллов: 1,00 из 1,00

One of the simplest collision resolution technique is called

- a. True
- b. discovered
- c. collision
- d. chaining ✔

Правильный ответ:
chaining

Вопрос **15**

Верно

Баллов: 1,00 из 1,00

With all equal-sized intervals, a greedy algorithm based on earliest start time will always select the maximum number of compatible intervals

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **16**

Частично правильный

Баллов: 0,50 из 1,00

Non-functional testing Parameters, match the following

interoperability	This non-functional parameter checks a software system interfaces with other software systems	✔
portability	The term refers to the ease with which the application can work in different hardware and software configurations	✖
efficiency	The extent to which any software system can handles capacity, quantity and response time	✔
flexibility	The flexibility of software to transfer from its current hardware or software environment	✖

Правильный ответ:

interoperability → This non-functional parameter checks a software system interfaces with other software systems,
portability → The flexibility of software to transfer from its current hardware or software environment,
efficiency → The extent to which any software system can handles capacity, quantity and response time,
flexibility → The term refers to the ease with which the application can work in different hardware and software configurations

Вопрос **17**

Верно

Баллов: 1,00 из 1,00

How do we denote constant complexity with O notation? Write without spaces.

Ответ: O(1) ✔

Правильный ответ: O(1)

Вопрос **18**

Частично правильный

Баллов: 0,50 из 1,00

Match the following

Endurance testing ✖	involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to id
Load testing ✔	checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before
Spike testing ✔	tests the software's reaction to sudden large spikes in the load generated by users
Stress testing ✖	is done to make sure the software can handle the expected load over a long period of time

Правильный ответ:
Endurance testing → is done to make sure the software can handle the expected load over a long period of time,

Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live,

Spike testing → tests the software's reaction to sudden large spikes in the load generated by users,

Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application

Вопрос **19**

Верно

Баллов: 1,00 из 1,00

What is the goal of load tests?

- a. check robustness of a system in case of extreme load
- b. validate that the system is able to handle a given load ✔
- c. determine how the system works under particular load
- d. test the system resistance in the event of a sudden spike of concurrent users

Правильный ответ:

validate that the system is able to handle a given load

Вопрос **20**

Верно

Баллов: 1,00 из 1,00

An algorithm is a well-defined sequence of steps used to solve a well-defined problem in finite time

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **21**

Неверно

Баллов: 0,00 из 1,00

Scalability testing is done to make sure the software can handle the expected load over a long period of time

Выберите один ответ:

- Верно ✖
- Неверно

Правильный ответ: Неверно

Вопрос **22**

Верно

Баллов: 1,00 из 1,00

If we divide an array into groups of 3, find the median of each group, recursively find the median of those medians, partition, and recurse, then we can obtain a linear-time median-finding algorithm

Выберите один ответ:

- Верно
- Неверно ✔

Правильный ответ: Неверно

Вопрос **23**

Верно

Баллов: 1,00 из 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:

- Верно
- Неверно ✔

Правильный ответ: Неверно

Вопрос **24**

Неверно

Баллов: 0,00 из 1,00

An algorithm's execution time is related to the number of _____ it requires

- a. parameters
- b. data fields ✖
- c. operations
- d. test data sets

Правильный ответ:
operations

Вопрос **25**

Верно

Баллов: 1,00 из 1,00

Which one is an algorithm which recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly?

- a. Big Oh notation
- b. Dynamic Programming
- c. Divide and conquer algorithm ✔
- d. Greedy algorithm

Правильный ответ:

Divide and conquer algorithm

Вопрос **26**

Верно

Баллов: 1,00 из 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower size solutions.

- a. Brute Force Solution
- b. Search algorithms
- c. Divide and Conquer
- d. Sorting algorithms
- e. Dynamic Programming ✔

Правильный ответ: Dynamic Programming

Вопрос **27**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Monitors performance tests using Performance monitors

- a. Performance Engineering Lead
- b. Performance Engineer
- c. Project Manager
- d. Monitoring Support ✔

Правильный ответ:
Monitoring Support

Вопрос **28**

Верно

Баллов: 1,00 из 1,00

If a problem can be solved by combining optimal solutions to non-overlapping problems, the strategy is called _____

- a. dynamic programming
- b. divide and conquer ✔
- c. greedy
- d. iteration
- e. recursion

Правильный ответ:
divide and conquer

Вопрос **29**

Верно

Баллов: 1,00 из 1,00

Which one is an approach for solving a problem by selecting the best option available at the moment

- a. Dynamic Programming
- b. Big Oh notation
- c. Greedy algorithm ✔
- d. Divide and conquer algorithm

Правильный ответ:
Greedy algorithm

Вопрос **30**

Неверно

Баллов: 0,00 из 1,00

What is the goal of soak testing?

- a. determine how the system works under particular load
- b. validate that the system is able to handle a given load
- c. check robustness of a system in case of extreme load ✖
- d. test the system resistance in the event of a sudden spike of concurrent users

Правильный ответ:

determine how the system works under particular load

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:43
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:44
Прошло времени	1 мин. 4 сек.
Баллы	2,00/30,00
Оценка	**6,67** из 100,00

Вопрос **1**

Неверно

Баллов: 0,00 из 1,00

Some modification of this algorithms allows us to solve any equation f(x) = 0 if the function f is monotonic.

- a. Binary Search
- b. Merge Sort ✖
- c. Sieve of Erathosphenes
- d. Thernary Search

Правильный ответ: Binary Search

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

What of the following is true for array?

- a. We can insert elements at the mid
- b. We can access any elements anytime with complexity O(1) ✔
- c. We can insert elements from both ends
- d. We can insert elements only from 1 end
- e. We can easily erase elements from the beginning

Правильный ответ: We can access any elements anytime with complexity O(1)

Вопрос **3**

Неверно

Баллов: 0,00 из 1,00

Which algorithm allows us to find all prime numbers up to given N?

- a. Thernary Search ✖
- b. Binary Search
- c. Sieve of Erathosphenes
- d. Merge Sort

Правильный ответ: Sieve of Erathosphenes

Вопрос **4**

Неверно

Баллов: 0,00 из 1,00

Which is NOT an example of Non-functional requirements?

- a. Page response time ✖
- b. Request Utilization
- c. CPU Utilization
- d. The number of users handled by the application

Правильный ответ:

Request Utilization

Вопрос **5**

Верно

Баллов: 1,00 из 1,00

Volume testing – under volume testing large no. of. Data is populated in a database and the overall software system's behavior is monitored. The objective is to check software application's performance under varying database volumes

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **6**

Нет ответа

Балл: 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower size solutions.

- a. Divide and Conquer
- b. Dynamic Programming
- c. Sorting algorithms
- d. Search algorithms
- e. Brute Force Solution

Правильный ответ: Divide and Conquer

Вопрос **7**

Нет ответа

Балл: 1,00

Which one is incorrect performance test case?

- a. Verify design of the application, is it easy to use
- b. Check database execution time when 500 records are read/written simultaneously
- c. Check CPU and memory usage of the application and the database server under peak load conditions
- d. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
- e. Check the maximum number of users that the application can handle before it crashes
- f. Verify response time is not more than 4 secs when 1000 users access the website simultaneously

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **8**

Нет ответа

Балл: 1,00

What is the goal of spike testing?

- a. test the system resistance in the event of a sudden spike of concurrent users
- b. validate that the system is able to handle a given load
- c. determine how the system works under particular load
- d. check robustness of a system in case of extreme load

Правильный ответ:

test the system resistance in the event of a sudden spike of concurrent users

Вопрос **9**

Нет ответа

Балл: 1,00

Which one is an algorithmic technique for solving an optimization problem by breaking it down into simpler subproblems and utilizing the fact that the optimal solution to the overall problem depends upon the optimal solution to its subproblems?

- a. Divide and conquer algorithm
- b. Big Oh notation
- c. Greedy algorithms
- d. Dynamic Programming

Правильный ответ:
Dynamic Programming

Вопрос **10**

Нет ответа

Балл: 1,00

Which are part of the steps at each level of recursion?

- a. divide
- b. all of the above
- c. conquer
- d. combine

Правильный ответ:
all of the above

Вопрос **11**

Нет ответа

Балл: 1,00

Dynamic Programming is mainly an optimization over plain recursion.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **12**

Нет ответа

Балл: 1,00

Choose non functional aspects

- a. performance, usability, reliability
- b. speed, response time, stability
- c. performance, speed, design
- d. reliability, scalability and resource usage

Правильный ответ:
performance, usability, reliability

Вопрос **13**

Нет ответа

Балл: 1,00

Match the following

Spike testing	Выберите...
Endurance testing	Выберите...
Load testing	Выберите...
Stress testing	Выберите...

Правильный ответ:
Spike testing → tests the software's reaction to sudden large spikes in the load generated by users,

Endurance testing → is done to make sure the software can handle the expected load over a long period of time,

Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live,

Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application

Вопрос **14**

Нет ответа

Балл: 1,00

Performance Testing - is a software testing process used for testing the speed, response time, stability, reliability, scalability and resource usage of a software application under particular workload.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **15**

Нет ответа

Балл: 1,00

Performance Testing is a discipline

- a. concerned with testing and reporting the current performance of a software application under various parameters
- b. concerned with testing and reporting the current performance of a software application with any diagrams
- c. concerned with analyzing design, diagrams, code and need to quick run

Правильный ответ:
concerned with testing and reporting the current performance of a software application under various parameters

Вопрос **16**

Нет ответа

Балл: 1,00

What do you mean by "Programming" in the context of Dynamic Programming?

- a. Merge sort
- b. A tabular method
- c. multiplication
- d. Always a least-weight edge

Правильный ответ:
A tabular method

Вопрос **17**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Facilitating and coordinating all schedules related to SDLC phases and infrastructure

- a. Project Manager
- b. Monitoring Support
- c. Performance Engineer
- d. Performance Engineering Lead

Правильный ответ:

Project Manager

Вопрос **18**

Нет ответа

Балл: 1,00

Quick sort, like merge sort, applies the

- a. Always a least-weight edge
- b. minimum of any edge satisfying the property
- c. gives us an upper bound on the running time for any input
- d. divide-and-conquer paradigm

Правильный ответ:
divide-and-conquer paradigm

Вопрос **19**

Нет ответа

Балл: 1,00

What is the time complexity of the brute force algorithm used to find the longest common subsequence?

- a. O(n)
- b. O(n3)
- c. O(2n)
- d. O(n2)

Правильный ответ:
O(2n)

Вопрос **20**

Нет ответа

Балл: 1,00

Which one is the definition of NFT?

- a. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.
- b. programming code specific to performance testing to automate the real-world user behavior
- c. type of testing of Software to check non-functional aspects
- d. prepares for performance test execution, executes performance test and analyze it

Правильный ответ:

type of testing of Software to check non-functional aspects

Вопрос **21**

Нет ответа

Балл: 1,00

What of the following is true for queue?

- a. We can insert elements from both ends
- b. We can easily erase elements from the beginning
- c. We can access any elements anytime with complexity O(1)
- d. We can insert elements only from 1 end

Правильные ответы: We can insert elements only from 1 end, We can easily erase elements from the beginning

Вопрос **22**

Нет ответа

Балл: 1,00

In the potential method for amortized analysis, the potential energy should never go negative

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **23**

Нет ответа

Балл: 1,00

On that device the dynamic memory is located.

- a. CPU
- b. RAM
- c. Processor
- d. Hard Drive
- e. GPU

Правильный ответ: RAM

Вопрос **24**

Нет ответа

Балл: 1,00

Memory that is allocated by program at the runtime by requesting from OS?

- a. RAM
- b. Heap
- c. Static Memory
- d. Dynamic Memory
- e. Hash

Правильный ответ: Dynamic Memory

Вопрос **25**

Нет ответа

Балл: 1,00

Improve and enhance knowledge of the product behavior and technologies in use

- a. analysing data
- b. performance analysis
- c. non functional testing

Правильный ответ:
non functional testing

Вопрос **26**

Нет ответа

Балл: 1,00

Which one is the definition of Performance Testing?

a. programming code specific to performance testing to automate the real-world user behavior

b. prepares for performance test execution, executes performance test and analyze it

c. type of testing of Software to check non-functional aspects

d. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws

Правильный ответ:

set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws

Вопрос **27**

Нет ответа

Балл: 1,00

Which does NOT belong to testing methodology?

a. running the simulation in a large scale

b. analyzing of simulation

c. recording a simulation

d. analyzing of test results

Правильный ответ:

analyzing of simulation

Вопрос **28**

Нет ответа

Балл: 1,00

The basic parameters monitored during performance testing include - Processor Usage

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **29**

Нет ответа

Балл: 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- a. big O
- b. big omega
- c. small omega
- d. big theta

Правильный ответ:
big O

Вопрос **30**

Нет ответа

Балл: 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower size solutions.

- a. Divide and Conquer
- b. Sorting algorithms
- c. Brute Force Solution
- d. Dynamic Programming
- e. Search algorithms

Правильный ответ: Dynamic Programming

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:58
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 01:08
Прошло времени	10 мин. 20 сек.
Баллы	23,00/30,00
Оценка	**76,67** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

What is the goal of stress testing?

a. validate that the system is able to handle a given load

b. test the system resistance in the event of a sudden spike of concurrent users

c. check robustness of a system in case of extreme load ✔

d. determine how the system works under particular load

Правильный ответ:

check robustness of a system in case of extreme load

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

What is Non Functional testing?

a. is defined as a type of Software testing to check non-functional aspects ✔

b. It is a testing of hardware and software

c. is defined as a type of Software testing to check whole project parts

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **3**

Нет ответа

Балл: 1,00

Which one is an algorithm which recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly?

- a. Divide and conquer algorithm
- b. Dynamic Programming
- c. Greedy algorithm
- d. Big Oh notation

Правильный ответ:

Divide and conquer algorithm

Вопрос **4**

Верно

Баллов: 1,00 из 1,00

Array located in dynamic memory?

- a. vector
- b. Pointer
- c. Dynamic array ✔
- d. Dynamic object
- e. Allocated array

Правильный ответ: Dynamic array

Вопрос **5**

Нет ответа

Балл: 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower size solutions.

- a. Dynamic Programming
- b. Divide and Conquer
- c. Brute Force Solution
- d. Search algorithms
- e. Sorting algorithms

Правильный ответ: Dynamic Programming

Вопрос **6**

Верно

Баллов: 1,00 из 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = 0	f(x) = o(g(x))	✔
lim f(x)/g(x) = Infinity	f(x) = Theta(g(x))	✔
lim f(x)/g(x) = ConstNonZero	f(x) = O(g(x))	✔

Правильный ответ: lim f(x)/g(x) = 0 → f(x) = o(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x)), lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x))

Вопрос **7**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Monitors performance tests using Performance monitors

- a. Performance Engineering Lead
- b. Project Manager
- c. Performance Engineer
- d. Monitoring Support ✔

Правильный ответ:
Monitoring Support

Вопрос **8**

Верно

Баллов: 1,00 из 1,00

Improve and enhance knowledge of the product behavior and technologies in use

- a. performance analysis
- b. non functional testing ✔
- c. analysing data

Правильный ответ:
non functional testing

Вопрос **9**

Нет ответа

Балл: 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Incremental approach
- b. f2 ,f4, f3, f1
- c. False
- d. Dynamic programming

Правильный ответ:
Dynamic programming

Вопрос **10**

Верно

Баллов: 1,00 из 1,00

Performance Testing Process

- a. Identify testing environment, plan performance tests, analyze, tune and retest ✔
- b. Identify testing environment, run project, making desing
- c. Plan performance tests, solveig algorithms, run code
- d. Design project, analyze system, run code

Правильный ответ:
Identify testing environment, plan performance tests, analyze, tune and retest

Вопрос **11**

Верно

Баллов: 1,00 из 1,00

How many permutations of elements for set with size N exist? Write without spaces.

Ответ: N! ✔

Правильный ответ: N!

Вопрос **12**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Manages schedules and activities related to Performance Testing projects

a. Project Manager

b. Performance Engineering Lead ✔

c. Monitoring Support

d. Performance Engineer

Правильный ответ:

Performance Engineering Lead

Вопрос **13**

Верно

Баллов: 1,00 из 1,00

In the merge-sort execution tree, the cost of operations done at each level of the tree is different.

Выберите один ответ:

Верно

Неверно ✔

Правильный ответ: Неверно

Вопрос **14**

Верно

Баллов: 1,00 из 1,00

Which one is incorrect performance test case?

- a. Verify design of the application, is it easy to use ✔
- b. Check database execution time when 500 records are read/written simultaneously
- c. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
- d. Check CPU and memory usage of the application and the database server under peak load conditions
- e. Check the maximum number of users that the application can handle before it crashes
- f. Verify response time is not more than 4 secs when 1000 users access the website simultaneously

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **15**

Верно

Баллов: 1,00 из 1,00

An algorithm's execution time is related to the number of _____ it requires

- a. data fields
- b. operations ✔
- c. parameters
- d. test data sets

Правильный ответ:
operations

Вопрос **16**

Верно

Баллов: 1,00 из 1,00

What is the height of full binary tree if the total number of elements in it is N? Write in O notation without spaces. O(log(N)) ✔ .

Правильный ответ: O(log(N))

Вопрос **17**

Верно

Баллов: 1,00 из 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Binary Search
- b. Sieve of Erathosphenes
- c. Merge Sort
- d. Thernary Search ✔

Правильный ответ: Thernary Search

Вопрос **18**

Верно

Баллов: 1,00 из 1,00

The change making problem can be solved by dynamic programming

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **19**

Верно

Баллов: 1,00 из 1,00

What of the following is true for list?

- a. We can insert elements from both ends ✔
- b. We can insert elements only from 1 end
- c. We can access any elements anytime with complexity O(1)
- d. We can insert elements at the mid ✔

Правильные ответы: We can insert elements from both ends, We can insert elements at the mid

Вопрос **20**

Верно

Баллов: 1,00 из 1,00

What is the goal of load tests?

- a. test the system resistance in the event of a sudden spike of concurrent users
- b. validate that the system is able to handle a given load ✔
- c. determine how the system works under particular load
- d. check robustness of a system in case of extreme load

Правильный ответ:

validate that the system is able to handle a given load

Вопрос **21**

Верно

Баллов: 1,00 из 1,00

Which of the following do we call the types of algorithms?

- [ ] a. Sorting algorithms
- [ ] b. Search algorithms
- [ ] c. Binary algorithms
- [x] d. Dynamic Programming ✔
- [x] e. Divide and Conquer ✔
- [ ] f. Tree algorithms
- [x] g. Brute Force Solution ✔
- [x] h. Greedy algorithms ✔

Правильные ответы: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **22**

Верно

Баллов: 1,00 из 1,00

Match the following

Scalability	Determines maximum user load the software application can handle	✔
Stability	Determines if the application is stable under varying loads	✔
Speed	Determines whether the application responds quickly	✔

Правильный ответ:
Scalability → Determines maximum user load the software application can handle,

Stability → Determines if the application is stable under varying loads,

Speed → Determines whether the application responds quickly

Вопрос **23**

Нет ответа

Балл: 1,00

Memory that is allocated by program at the runtime by requesting from OS?

- a. Static Memory
- b. Hash
- c. Heap
- d. RAM
- e. Dynamic Memory

Правильный ответ: Dynamic Memory

Вопрос **24**

Верно

Баллов: 1,00 из 1,00

Performance Testing Metrics

- a. Processor Usage, Memory use, Bandwidth ✔
- b. Garbage collection, Top waits, Fast monitor
- c. Processor Usage, Garbage collection, Cool design

Правильный ответ:
Processor Usage, Memory use, Bandwidth

Вопрос **25**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Supports performance test execution as configuration or application issues are found

- a. Application Support
- b. Performance Engineering Lead
- c. Project Manager
- d. Monitoring Support

Правильный ответ:
Application Support

Вопрос **26**

Нет ответа

Балл: 1,00

With all equal-sized intervals, a greedy algorithm based on earliest start time will always select the maximum number of compatible intervals

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **27**

Нет ответа

Балл: 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. A Directed Acyclic Graph ie a graph with no cycles
- b. 1. sorted

  2. decrease-by-a-constant-factor
- c. 1. Warshall's
  2. Floyd's
- d. Euclid's algorithm, interpolation search, Nim... etc

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **28**

Верно

Баллов: 1,00 из 1,00

On that device the dynamic memory is located.

- a. CPU
- b. GPU
- c. Hard Drive
- d. RAM ✔
- e. Processor

Правильный ответ: RAM

Вопрос **29**

Верно

Баллов: 1,00 из 1,00

Which one is the definition of NFT?

- a. programming code specific to performance testing to automate the real-world user behavior
- b. type of testing of Software to check non-functional aspects ✔
- c. prepares for performance test execution, executes performance test and analyze it
- d. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.

Правильный ответ:

type of testing of Software to check non-functional aspects

Вопрос **30**

Верно

Баллов: 1,00 из 1,00

Which are part of the steps at each level of recursion?

- a. all of the above ✔
- b. conquer
- c. combine
- d. divide

Правильный ответ:
all of the above

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:16
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:22
Прошло времени	5 мин. 55 сек.
Баллы	16,50/30,00
Оценка	**55,00** из 100,00

Вопрос **1**

Частично правильный

Баллов: 0,50 из 1,00

Which of the following algorithms has "divide and conquer" type?

- [x] a. Merge Sort ✔
- [ ] b. Iterating through permutations
- [ ] c. Sieve of Erathosphenes
- [ ] d. Quick Sort

Правильные ответы: Merge Sort, Quick Sort

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

Memory given us by the OS at the beginning of program run, that allways has the same size?

- a. Heap
- b. RAM
- c. Hash
- d. Static Memory ✔
- e. Dynamic Memory

Правильный ответ: Static Memory

Вопрос **3**

Верно

Баллов: 1,00 из 1,00

What is Non Functional testing?

- a. is defined as a type of Software testing to check non-functional aspects ✔
- b. is defined as a type of Software testing to check whole project parts
- c. It is a testing of hardware and software

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **4**

Верно

Баллов: 1,00 из 1,00

An algorithm's execution time is related to the number of _____ it requires

- a. test data sets
- b. parameters
- c. operations ✔
- d. data fields

Правильный ответ:
operations

Вопрос **5**

Верно

Баллов: 1,00 из 1,00

Quick sort, like merge sort, applies the

- a. minimum of any edge satisfying the property
- b. Always a least-weight edge
- c. gives us an upper bound on the running time for any input
- d. divide-and-conquer paradigm ✔

Правильный ответ:
divide-and-conquer paradigm

Вопрос **6**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Facilitating and coordinating all schedules related to SDLC phases and infrastructure

- a. Performance Engineering Lead
- b. Performance Engineer
- c. Project Manager ✔
- d. Monitoring Support

Правильный ответ:

Project Manager

Вопрос **7**

Неверно

Баллов: 0,00 из 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. Euclid's algorithm, interpolation search, Nim... etc
- b. A Directed Acyclic Graph ie a graph with no cycles ✖
- c. 1. Warshall's
  2. Floyd's
- d. 1. sorted

  2. decrease-by-a-constant-factor

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **8**

Верно

Баллов: 1,00 из 1,00

The change making problem can be solved by dynamic programming

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **9**

Неверно

Баллов: 0,00 из 1,00

If a problem can be solved by combining optimal solutions to non-overlapping problems, the strategy is called _____

- a. recursion
- b. iteration
- c. dynamic programming ✘
- d. divide and conquer
- e. greedy

Правильный ответ:
divide and conquer

Вопрос **10**

Верно

Баллов: 1,00 из 1,00

Dynamic Programming is mainly an optimization over plain recursion.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **11**

Верно

Баллов: 1,00 из 1,00

Performance Engineering aims are to optimize the most important application performance trait i.e. user experience.

Выберите один ответ:

- (●) Верно ✔
- ( ) Неверно

Правильный ответ: Верно

Вопрос **12**

Неверно

Баллов: 0,00 из 1,00

Which of the following do we call the types of algorithms?

- [x] a. Sorting algorithms ✖
- [ ] b. Divide and Conquer
- [ ] c. Binary algorithms
- [ ] d. Tree algorithms
- [ ] e. Search algorithms
- [ ] f. Greedy algorithms
- [ ] g. Dynamic Programming
- [ ] h. Brute Force Solution

Правильные ответы: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **13**

Неверно

Баллов: 0,00 из 1,00

On that device the static memory is located.

- ( ) a. RAM
- (●) b. Hard Drive ✖
- ( ) c. GPU
- ( ) d. Processor
- ( ) e. CPU

Правильный ответ: RAM

Вопрос **14**

Неверно

Баллов: 0,00 из 1,00

Which does NOT belong to testing methodology?

- a. analyzing of test results ✖
- b. running the simulation in a large scale
- c. analyzing of simulation
- d. recording a simulation

Правильный ответ:

analyzing of simulation

Вопрос **15**

Верно

Баллов: 1,00 из 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **16**

Верно

Баллов: 1,00 из 1,00

What do you mean by "Programming" in the context of Dynamic Programming?

- a. A tabular method ✔
- b. multiplication
- c. Merge sort
- d. Always a least-weight edge

Правильный ответ:
A tabular method

Вопрос **17**

Верно

Баллов: 1,00 из 1,00

Memory that is allocated by program at the runtime by requesting from OS?

- a. Dynamic Memory ✔
- b. RAM
- c. Heap
- d. Static Memory
- e. Hash

Правильный ответ: Dynamic Memory

Вопрос **18**

Неверно

Баллов: 0,00 из 1,00

Which one is incorrect performance test case?

- a. Check database execution time when 500 records are read/written simultaneously ✖
- b. Check CPU and memory usage of the application and the database server under peak load conditions
- c. Verify response time is not more than 4 secs when 1000 users access the website simultaneously
- d. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
- e. Verify design of the application, is it easy to use
- f. Check the maximum number of users that the application can handle before it crashes

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **19**

Верно

Баллов: 1,00 из 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Thernary Search ✔
- b. Sieve of Erathosphenes
- c. Binary Search
- d. Merge Sort

Правильный ответ: Thernary Search

Вопрос **20**

Неверно

Баллов: 0,00 из 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = 0	f(x) = Theta(g(x))	✖
lim f(x)/g(x) = ConstNonZero	Выберите...	
lim f(x)/g(x) = Infinity	Выберите...	

Правильный ответ: lim f(x)/g(x) = 0 → f(x) = o(g(x)), lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x))

Вопрос **21**

Верно

Баллов: 1,00 из 1,00

Performance Engineering is the process

- a. by which software is tested and tuned with the intent of realizing the required performance ✔
- b. by which software is analyzed and will work faster
- c. by which software should be runned

Правильный ответ:
by which software is tested and tuned with the intent of realizing the required performance

Вопрос **22**

Верно

Баллов: 1,00 из 1,00

A dynamic-programming algorithm solves each sub-problem just once and then saves its answer in a table, thereby avoiding the work of recomputing the answer every time it solves each sub problem.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **23**

Верно

Баллов: 1,00 из 1,00

Which are part of the steps at each level of recursion?

- a. all of the above ✔
- b. divide
- c. combine
- d. conquer

Правильный ответ:
all of the above

Вопрос **24**

Неверно

Баллов: 0,00 из 1,00

Choose non functional aspects

- a. speed, response time, stability ✖
- b. reliability, scalability and resource usage
- c. performance, usability, reliability
- d. performance, speed, design

Правильный ответ:
performance, usability, reliability

Вопрос **25**

Неверно

Баллов: 0,00 из 1,00

What is the time complexity of the brute force algorithm used to find the longest common subsequence?

- a. O(n) ✖
- b. O(n2)
- c. O(2n)
- d. O(n3)

Правильный ответ:
O(2n)

Вопрос **26**

Неверно

Баллов: 0,00 из 1,00

Types of Performance Testing

- a. Nouse, price, function testing ✖
- b. Spike, volume, nouse testing
- c. Price, speed, level testing
- d. Load, stress, spike testing

Правильный ответ:
Load, stress, spike testing

Вопрос **27**

Частично правильный

Баллов: 0,50 из 1,00

What of the following is true for queue?

- [x] a. We can insert elements only from 1 end ✔
- [ ] b. We can access any elements anytime with complexity O(1)
- [ ] c. We can easily erase elements from the beginning
- [ ] d. We can insert elements from both ends

Правильные ответы: We can insert elements only from 1 end, We can easily erase elements from the beginning

Вопрос **28**

Частично правильный

Баллов: 0,50 из 1,00

What of the following is true for list?

- [x] a. We can insert elements at the mid ✔
- [ ] b. We can insert elements from both ends
- [ ] c. We can access any elements anytime with complexity O(1)
- [ ] d. We can insert elements only from 1 end

Правильные ответы: We can insert elements from both ends, We can insert elements at the mid

Вопрос **29**

Неверно

Баллов: 0,00 из 1,00

One of the simplest collision resolution technique is called

- (●) a. True ✖
- ( ) b. collision
- ( ) c. chaining
- ( ) d. discovered

Правильный ответ:
chaining

Вопрос **30**

Неверно

Баллов: 0,00 из 1,00

Dynamic programming can be applied to common problems like

- (●) a. None of them ✖
- ( ) b. Fibonacci problems
- ( ) c. All of the above
- ( ) d. Finding if a word can be built from a set of strings
- ( ) e. Coin change problem: from a limited set of coins build a specified amount of change
- ( ) f. Assembly line scheduling

Правильный ответ:
All of the above

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:16
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:17
Прошло времени	1 мин. 16 сек.
Баллы	1,00/30,00
Оценка	**3,33** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

On that device the dynamic memory is located.

a. GPU
b. Hard Drive
c. RAM ✔
d. Processor
e. CPU

Правильный ответ: RAM

Вопрос **2**

Неверно

Баллов: 0,00 из 1,00

Type of Software Testing

a. Functional, non functional ✖
b. Functional, non functional, maintenance
c. Non functional, maintenance
d. Analyzing, rateing, maintenance

Правильный ответ:
Functional, non functional, maintenance

Вопрос **3**

Неверно

Баллов: 0,00 из 1,00

Which does NOT belong to testing methodology?

- a. running the simulation in a large scale
- b. analyzing of simulation
- c. recording a simulation
- d. analyzing of test results ✖

Правильный ответ:

analyzing of simulation

Вопрос **4**

Нет ответа

Балл: 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **5**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Manages schedules and activities related to Performance Testing projects

a. Performance Engineering Lead

b. Performance Engineer

c. Project Manager

d. Monitoring Support

Правильный ответ:

Performance Engineering Lead

Вопрос **6**

Нет ответа

Балл: 1,00

What is the goal of soak testing?

a. validate that the system is able to handle a given load

b. check robustness of a system in case of extreme load

c. test the system resistance in the event of a sudden spike of concurrent users

d. determine how the system works under particular load

Правильный ответ:

determine how the system works under particular load

Вопрос **7**

Нет ответа

Балл: 1,00

Non-functional testing Parameters, match the following

The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand	Выберите...
The extent to which any software system continuously performs the specified functions without failure	Выберите...
The parameter determines the degree to which user can depend on the system during its operation	Выберите...
The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources	Выберите...
The parameter checks that the software system continues to function and recovers itself in case of system failure	Выберите...
The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system	Выберите...

Правильный ответ:
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand → Scalability,

The extent to which any software system continuously performs the specified functions without failure → Reliability,

The parameter determines the degree to which user can depend on the system during its operation → Availability,

The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources → Security,

The parameter checks that the software system continues to function and recovers itself in case of system failure → Survivability,

The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system → Usability

Вопрос **8**

Нет ответа

Балл: 1,00

What is Linear Programming?

a. - Dynamic programming is a technique for solving problems with overlapping sub-problems

   - Typically, these sub-problems arise from a recurrence relating a solution to a given problem with solutions to its smaller sub-problems of the same type

   - Dynamic programming suggests solving each smaller sub-problem once and recording the results in a table from which a solution to the original problem can be then obtained

b. Instance simplification is transforming an instance of a problem to an instance of the same problem with some special property that makes the problem easier to solve.

c. The problem is one that asks to list vertices of a digraph in an order such that for every edge of the digraph, the vertex it starts at is listed before the vertex it points to.

d. Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Правильный ответ:
Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Вопрос **9**

Нет ответа

Балл: 1,00

What is Non Functional testing?

- a. It is a testing of hardware and software
- b. is defined as a type of Software testing to check non-functional aspects
- c. is defined as a type of Software testing to check whole project parts

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **10**

Нет ответа

Балл: 1,00

Memory that is allocated by program at the runtime by requesting from OS?

- a. RAM
- b. Heap
- c. Hash
- d. Static Memory
- e. Dynamic Memory

Правильный ответ: Dynamic Memory

Вопрос **11**

Нет ответа

Балл: 1,00

Types of Performance Testing

- a. Spike, volume, nouse testing
- b. Price, speed, level testing
- c. Load, stress, spike testing
- d. Nouse, price, function testing

Правильный ответ:
Load, stress, spike testing

Вопрос **12**

Нет ответа

Балл: 1,00

Which one is incorrect performance test case?

- a. Check the maximum number of users that the application can handle before it crashes
- b. Check CPU and memory usage of the application and the database server under peak load conditions
- c. Verify response time is not more than 4 secs when 1000 users access the website simultaneously
- d. Verify design of the application, is it easy to use
- e. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
- f. Check database execution time when 500 records are read/written simultaneously

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **13**

Нет ответа

Балл: 1,00

What is the goal of spike testing?

- a. determine how the system works under particular load
- b. validate that the system is able to handle a given load
- c. test the system resistance in the event of a sudden spike of concurrent users
- d. check robustness of a system in case of extreme load

Правильный ответ:

test the system resistance in the event of a sudden spike of concurrent users

Вопрос **14**

Нет ответа

Балл: 1,00

How do we denote constant complexity with O notation? Write without spaces.

Ответ: ✖

Правильный ответ: O(1)

Вопрос **15**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Monitors performance tests using Performance monitors

- a. Project Manager
- b. Monitoring Support
- c. Performance Engineering Lead
- d. Performance Engineer

Правильный ответ:
Monitoring Support

Вопрос **16**

Нет ответа

Балл: 1,00

Dynamic programming can be applied to common problems like

- a. None of them
- b. Fibonacci problems
- c. Coin change problem: from a limited set of coins build a specified amount of change
- d. Assembly line scheduling
- e. All of the above
- f. Finding if a word can be built from a set of strings

Правильный ответ:
All of the above

Вопрос **17**

Нет ответа

Балл: 1,00

With all equal-sized intervals, a greedy algorithm based on earliest start time will always select the maximum number of compatible intervals

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **18**

Нет ответа

Балл: 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower size solutions.

- a. Search algorithms
- b. Brute Force Solution
- c. Dynamic Programming
- d. Sorting algorithms
- e. Divide and Conquer

Правильный ответ: Divide and Conquer

Вопрос **19**

Нет ответа

Балл: 1,00

Which one is an approach for solving a problem by selecting the best option available at the moment

- a. Greedy algorithm
- b. Big Oh notation
- c. Divide and conquer algorithm
- d. Dynamic Programming

Правильный ответ:
Greedy algorithm

Вопрос **20**

Нет ответа

Балл: 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- a. big O
- b. small omega
- c. big omega
- d. big theta

Правильный ответ:
big O

Вопрос **21**

Нет ответа

Балл: 1,00

Scalability testing is done to make sure the software can handle the expected load over a long period of time

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **22**

Нет ответа

Балл: 1,00

Choose non functional aspects

- a. speed, response time, stability
- b. performance, usability, reliability
- c. performance, speed, design
- d. reliability, scalability and resource usage

Правильный ответ:
performance, usability, reliability

Вопрос **23**

Нет ответа

Балл: 1,00

If we divide an array into groups of 3, find the median of each group, recursively find the median of those medians, partition, and recurse, then we can obtain a linear-time median-finding algorithm

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **24**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Supports performance test execution as configuration or application issues are found

- a. Application Support
- b. Performance Engineering Lead
- c. Monitoring Support
- d. Project Manager

Правильный ответ:
Application Support

Вопрос **25**

Нет ответа

Балл: 1,00

On that device the static memory is located.

- a. Hard Drive
- b. Processor
- c. CPU
- d. GPU
- e. RAM

Правильный ответ: RAM

Вопрос **26**

Нет ответа

Балл: 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Dynamic programming
- b. f2 ,f4, f3, f1
- c. False
- d. Incremental approach

Правильный ответ:
Dynamic programming

Вопрос **27**

Нет ответа

Балл: 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

- a. Dynamic Programming
- b. Big Oh notation
- c. Divide and conquer
- d. Greedy algorithm

Правильный ответ:
Big Oh notation

Вопрос **28**

Нет ответа

Балл: 1,00

What is the complexity of quick sort algorithm in worst case? Write without spaces, array size N.

Ответ: ✖

Правильный ответ: O(N N)

Вопрос **29**

Нет ответа

Балл: 1,00

In the potential method for amortized analysis, the potential energy should never go negative

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **30**

Нет ответа

Балл: 1,00

Which are part of the steps at each level of recursion?

- a. divide
- b. all of the above
- c. combine
- d. conquer

Правильный ответ:
all of the above

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:13
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:23
Прошло времени	10 мин. 11 сек.
Баллы	22,33/30,00
Оценка	**74,44** из 100,00

Вопрос **1**
Неверно
Баллов: 0,00 из 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower size solutions.

a. Search algorithms
b. Brute Force Solution
c. Dynamic Programming ✖
d. Sorting algorithms
e. Divide and Conquer

Правильный ответ: Divide and Conquer

Вопрос **2**
Неверно
Баллов: 0,00 из 1,00

Type of Software Testing

a. Non functional, maintenance
b. Analyzing, rateing, maintenance
c. Functional, non functional, maintenance
d. Functional, non functional ✖

Правильный ответ:
Functional, non functional, maintenance

Вопрос **3**
Верно
Баллов: 1,00 из 1,00

Which one is the definition of Performance Test Script?

a. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.

b. prepares for performance test execution, executes performance test and analyze it

c. programming code specific to performance testing to automate the real-world user behavior ✔

d. type of testing of Software to check non-functional aspects

Правильный ответ:

programming code specific to performance testing to automate the real-world user behavior

Вопрос **4**
Неверно
Баллов: 0,00 из 1,00

What is the goal of soak testing?

a. determine how the system works under particular load

b. test the system resistance in the event of a sudden spike of concurrent users

c. check robustness of a system in case of extreme load ✖

d. validate that the system is able to handle a given load

Правильный ответ:

determine how the system works under particular load

Вопрос **5**
Верно
Баллов: 1,00 из 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

Верно ✔

Неверно

Правильный ответ: Верно

Вопрос **6**
Частично правильный
Баллов: 0,33 из 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = ConstNonZero	f(x) = Theta(g(x))	✖
lim f(x)/g(x) = 0	f(x) = o(g(x))	✔

lim f(x)/g(x) = Infinity f(x) = O(g(x)) ✖

Правильный ответ: lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x)), lim f(x)/g(x) = 0 → f(x) = o(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x))

Вопрос **7**
Верно
Баллов: 1,00 из 1,00

Which one is an algorithm which recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly?

- a. Greedy algorithm
- b. Divide and conquer algorithm ✔
- c. Dynamic Programming
- d. Big Oh notation

Правильный ответ:

Divide and conquer algorithm

Вопрос **8**
Неверно
Баллов: 0,00 из 1,00

What is the height of full binary tree if the total number of elements in it is N? Write in O notation without spaces. log2(n+´ ✖ .

Правильный ответ: O(log(N))

Вопрос **9**
Верно
Баллов: 1,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Incremental approach
- b. False
- c. f2 ,f4, f3, f1
- d. Dynamic programming ✔

Правильный ответ:
Dynamic programming

Вопрос **10**
Верно
Баллов: 1,00

Which one is an approach for solving a problem by selecting the best option available at the moment

- a. Dynamic Programming

из 1,00

a. Dynamic Programming

b. Greedy algorithm ✔

c. Big Oh notation

d. Divide and conquer algorithm

Правильный ответ:
Greedy algorithm

Вопрос **11**
Верно
Баллов: 1,00 из 1,00

Dynamic programming can be applied to common problems like

a. Fibonacci problems

b. Coin change problem: from a limited set of coins build a specified amount of change

c. All of the above ✔

d. Assembly line scheduling

e. Finding if a word can be built from a set of strings

f. None of them

Правильный ответ:
All of the above

Вопрос **12**
Верно
Баллов: 1,00 из 1,00

Performance Testing - is a software testing process used for testing the speed, response time, stability, reliability, scalability and resource usage of a software application under particular workload.

Выберите один ответ:

Верно ✔

Неверно

Правильный ответ: Верно

Вопрос **13**
Верно
Баллов: 1,00 из 1,00

Which of the following statement(s) is TRUE?

a. A hash function may give the same hash value for distinct messages.

b. A hash function takes a message of fixed length and generates a code of variable length.

c. A hash function takes a message of arbitrary length and generates a fixed length code. ✔

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Вопрос **14**
Неверно
Баллов: 0,00 из 1,00

What of the following is true for list?

- [x] a. We can insert elements only from 1 end ✖
- [ ] b. We can insert elements from both ends
- [ ] c. We can access any elements anytime with complexity O(1)
- [ ] d. We can insert elements at the mid

Правильные ответы: We can insert elements from both ends, We can insert elements at the mid

Вопрос **15**
Верно
Баллов: 1,00 из 1,00

An algorithm is a well-defined sequence of steps used to solve a well-defined problem in finite time

Выберите один ответ:

- (•) Верно ✔
- ( ) Неверно

Правильный ответ: Верно

Вопрос **16**
Верно
Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Prepares for performance test execution, executes performance tests, analyzes performance tests, and tracks problem reports

- ( ) a. Project Manager
- ( ) b. Performance Engineering Lead
- ( ) c. Monitoring Support
- (•) d. Performance Engineer ✔

Правильный ответ:
Performance Engineer

Вопрос **17**
Верно
Баллов: 1,00 из 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- (•) a. big O ✔
- ( ) b. big theta
- ( ) c. small omega
- ( ) d. big omega

Правильный ответ:
big O

Вопрос **18**

Вопрос 18
Верно
Баллов: 1,00 из 1,00

In the potential method for amortized analysis, the potential energy should never go negative

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **19**
Верно
Баллов: 1,00 из 1,00

The problem of weighted interval scheduling can be solved in O(n log n) time using dynamic programming

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **20**
Верно
Баллов: 1,00 из 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

- a. Dynamic Programming
- b. Divide and conquer
- c. Big Oh notation ✔
- d. Greedy algorithm

Правильный ответ:
Big Oh notation

Вопрос **21**
Верно
Баллов: 1,00 из 1,00

What is Non Functional testing?

- a. It is a testing of hardware and software
- b. is defined as a type of Software testing to check whole project parts
- c. is defined as a type of Software testing to check non-functional aspects ✔

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **22**
Верно
Баллов: 1,00 из 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. 1. Warshall's
  2. Floyd's

b. 1. sorted

2. decrease-by-a-constant-factor

c. Euclid's algorithm, interpolation search, Nim... etc

d. A Directed Acyclic Graph ie a graph with no cycles

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **23**
Верно
Баллов: 1,00 из 1,00

Which are part of the steps at each level of recursion?

a. conquer

b. combine

c. divide

d. all of the above ✔

Правильный ответ:
all of the above

Вопрос **24**
Верно
Баллов: 1,00 из 1,00

What is the complexity of quick sort algorithm in worst case? Write without spaces, array size N.

Ответ: O(N2) ✔

Правильный ответ: O(N N)

Вопрос **25**
Неверно
Баллов: 0,00 из 1,00

Memory given us by the OS at the beginning of program run, that allways has the same size?

a. RAM ✘

b. Dynamic Memory

c. Hash

d. Heap

e. Static Memory

Правильный ответ: Static Memory

Вопрос **26**
Верно
Баллов: 1,00 из 1,00

How do we denote constant complexity with O notation? Write without spaces.

Ответ: O(1) ✔

Правильный ответ: O(1)

Вопрос **27**
Верно
Баллов: 1,00 из 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:
- Верно
- Неверно ✔

Правильный ответ: Неверно

Вопрос **28**
Неверно
Баллов: 0,00 из 1,00

An algorithm's execution time is related to the number of _____ it requires

- a. test data sets
- b. operations
- c. data fields ✖
- d. parameters

Правильный ответ:
operations

Вопрос **29**
Верно
Баллов: 1,00 из 1,00

Match the following

Endurance testing ✔	is done to make sure the software can handle the expected load over a long period of time
Stress testing ✔	involves testing an application under extreme workloads to see how it handles high traffic or data proc
Spike testing ✔	tests the software's reaction to sudden large spikes in the load generated by users
Load testing ✔	checks the application's ability to perform under anticipated user loads. The objective is to identify per

Правильный ответ:
Endurance testing → is done to make sure the software can handle the expected load over a long period of time,

Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application,

Spike testing → tests the software's reaction to sudden large spikes in the load generated by users,

Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live

Вопрос **30**

Верно

Баллов: 1,00 из 1,00

Array located in dynamic memory?

- a. Dynamic object
- b. Allocated array
- c. Pointer
- d. Dynamic array ✔
- e. vector

Правильный ответ: Dynamic array

◀ preparation for final

Перейти на...

week 1 tasks ▶

Тест начат	Среда, 25 Май 2022, 00:12
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:15
Прошло времени	2 мин. 55 сек.
Баллы	3,00/30,00
Оценка	**10,00** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

Array located in dynamic memory?

- a. Allocated array
- b. Dynamic object
- c. Dynamic array ✔
- d. Pointer
- e. vector

Правильный ответ: Dynamic array

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

Types of Performance Testing

- a. Price, speed, level testing
- b. Nouse, price, function testing
- c. Spike, volume, nouse testing
- d. Load, stress, spike testing ✔

Правильный ответ:
Load, stress, spike testing

Вопрос **3**

Верно

Баллов: 1,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Dynamic programming ✔
- b. False
- c. Incremental approach
- d. f2 ,f4, f3, f1

Правильный ответ:
Dynamic programming

Вопрос **4**

Нет ответа

Балл: 1,00

Match the following

Stress testing	Выберите...
Spike testing	Выберите...
Endurance testing	Выберите...
Load testing	Выберите...

Правильный ответ:
Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application,

Spike testing → tests the software's reaction to sudden large spikes in the load generated by users,

Endurance testing → is done to make sure the software can handle the expected load over a long period of time,

Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live

Вопрос **5**

Нет ответа

Балл: 1,00

What is the goal of spike testing?

- a. validate that the system is able to handle a given load
- b. determine how the system works under particular load
- c. test the system resistance in the event of a sudden spike of concurrent users
- d. check robustness of a system in case of extreme load

Правильный ответ:

test the system resistance in the event of a sudden spike of concurrent users

Вопрос **6**

Нет ответа

Балл: 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Thernary Search
- b. Binary Search
- c. Sieve of Erathosphenes
- d. Merge Sort

Правильный ответ: Thernary Search

Вопрос **7**

Нет ответа

Балл: 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = 0	Выберите...
lim f(x)/g(x) = Infinity	Выберите...
lim f(x)/g(x) = ConstNonZero	Выберите...

Правильный ответ: lim f(x)/g(x) = 0 → f(x) = o(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x)), lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x))

Вопрос **8**

Нет ответа

Балл: 1,00

What is the goal of load tests?

a. check robustness of a system in case of extreme load

b. determine how the system works under particular load

c. test the system resistance in the event of a sudden spike of concurrent users

d. validate that the system is able to handle a given load

Правильный ответ:

validate that the system is able to handle a given load

Вопрос **9**

Нет ответа

Балл: 1,00

The basic parameters monitored during performance testing include - Processor Usage

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **10**

Нет ответа

Балл: 1,00

Performance Testing is a discipline

- a. concerned with analyzing design, diagrams, code and need to quick run
- b. concerned with testing and reporting the current performance of a software application under various parameters
- c. concerned with testing and reporting the current performance of a software application with any diagrams

Правильный ответ:
concerned with testing and reporting the current performance of a software application under various parameters

Вопрос **11**

Нет ответа

Балл: 1,00

Which one is incorrect performance test case?

- a. Check CPU and memory usage of the application and the database server under peak load conditions
- b. Verify response time is not more than 4 secs when 1000 users access the website simultaneously
- c. Verify design of the application, is it easy to use
- d. Check the maximum number of users that the application can handle before it crashes
- e. Check database execution time when 500 records are read/written simultaneously
- f. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **12**

Нет ответа

Балл: 1,00

The running time of an algorithm is the number of instructions it executes when run on a particular instance

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **13**

Нет ответа

Балл: 1,00

What will be the output?

```
using namespace std;

int fib(int n)
{
    if (n <= 1)
        return n;
    return fib(n-1) + fib(n-2);
}

int main ()
{
    int n = 9;
    cout << fib(n);
    getchar();
    return 0;
}
```

- a. 1
- b. 16
- c. 33
- d. 34
- e. 0

Правильный ответ:
34

Вопрос **14**

Нет ответа

Балл: 1,00

Performance Testing Process

- a. Design project, analyze system, run code
- b. Identify testing environment, plan performance tests, analyze, tune and retest
- c. Identify testing environment, run project, making desing
- d. Plan performance tests, solveig algorithms, run code

Правильный ответ:
Identify testing environment, plan performance tests, analyze, tune and retest

Вопрос **15**

Нет ответа

Балл: 1,00

Which one is an algorithmic technique for solving an optimization problem by breaking it down into simpler subproblems and utilizing the fact that the optimal solution to the overall problem depends upon the optimal solution to its subproblems?

- a. Big Oh notation
- b. Greedy algorithms
- c. Divide and conquer algorithm
- d. Dynamic Programming

Правильный ответ:
Dynamic Programming

Вопрос **16**

Нет ответа

Балл: 1,00

Which one is an algorithm which recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly?

a. Greedy algorithm

b. Big Oh notation

c. Divide and conquer algorithm

d. Dynamic Programming

Правильный ответ:

Divide and conquer algorithm

Вопрос **17**

Нет ответа

Балл: 1,00

Which of the following statement(s) is TRUE?

- a. A hash function may give the same hash value for distinct messages.
- b. A hash function takes a message of arbitrary length and generates a fixed length code.
- c. A hash function takes a message of fixed length and generates a code of variable length.

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Вопрос **18**

Нет ответа

Балл: 1,00

Choose non functional aspects

- a. performance, usability, reliability
- b. performance, speed, design
- c. speed, response time, stability
- d. reliability, scalability and resource usage

Правильный ответ:
performance, usability, reliability

Вопрос **19**

Нет ответа

Балл: 1,00

Type of Software Testing

- a. Functional, non functional, maintenance
- b. Analyzing, rateing, maintenance
- c. Non functional, maintenance
- d. Functional, non functional

Правильный ответ:
Functional, non functional, maintenance

Вопрос **20**

Нет ответа

Балл: 1,00

In the merge-sort execution tree, the cost of operations done at each level of the tree is different.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **21**

Нет ответа

Балл: 1,00

Which of the following algorithms has "divide and conquer" type?

- a. Quick Sort
- b. Merge Sort
- c. Iterating through permutations
- d. Sieve of Erathosphenes

Правильные ответы: Merge Sort, Quick Sort

Вопрос **22**

Нет ответа

Балл: 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- a. big O
- b. big omega
- c. big theta
- d. small omega

Правильный ответ:
big O

Вопрос **23**

Нет ответа

Балл: 1,00

Non-functional testing Parameters, match the following

flexibility	Выберите...
efficiency	Выберите...
portability	Выберите...
interoperability	Выберите...

Правильный ответ:
flexibility → The term refers to the ease with which the application can work in different hardware and software configurations,

efficiency → The extent to which any software system can handles capacity, quantity and response time,

portability → The flexibility of software to transfer from its current hardware or software environment,

interoperability → This non-functional parameter checks a software system interfaces with other software systems

Вопрос **24**

Нет ответа

Балл: 1,00

Which system attributes define Non functional requirements?

a. security, reliability, performance, maintainability, loading time

b. security, reliability, utilization, maintainability, scalability, usability

c. security, reliability, performance, maintainability, scalability, usability

d. security, memorization, performance, maintainability, scalability, usability

Правильный ответ:

security, reliability, performance, maintainability, scalability, usability

Вопрос **25**

Нет ответа

Балл: 1,00

Which are part of the steps at each level of recursion?

- a. all of the above
- b. conquer
- c. divide
- d. combine

Правильный ответ:
all of the above

Вопрос **26**

Нет ответа

Балл: 1,00

What is the time complexity of the brute force algorithm used to find the longest common subsequence?

- a. O(n2)
- b. O(n3)
- c. O(n)
- d. O(2n)

Правильный ответ:
O(2n)

Вопрос **27**

Нет ответа

Балл: 1,00

How do we denote constant complexity with O notation? Write without spaces.

Ответ: ✖

Правильный ответ: O(1)

Вопрос **28**

Нет ответа

Балл: 1,00

How many permutations of elements for set with size N exist? Write without spaces.

Ответ:

Правильный ответ: N!

Вопрос **29**

Нет ответа

Балл: 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. A Directed Acyclic Graph ie a graph with no cycles
- b. 1. Warshall's
  2. Floyd's
- c. 1. sorted

  2. decrease-by-a-constant-factor
- d. Euclid's algorithm, interpolation search, Nim... etc

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **30**

Нет ответа

Балл: 1,00

Which of the following sorting algorithms for a typical implementation gives the best performance when applied on an array which is sorted or almost sorted?

- a. Merge sort
- b. Merge
- c. Priority queue
- d. Insertion sort

Правильный ответ:
Insertion sort

◄ preparation for final

Перейти на...

week 1 tasks ►

Software Performance Analysis | Sadykova Zuleikha

Тест начат	Среда, 25 Май 2022, 09:21
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 09:21
Затраченное время	1 мин
Оценка	100,00 из 100,00
Вопрос	0,00 из 100,00

Навигация по тесту

Показать одну страницу
Закончить обзор

Вопрос **1**
Не отвечен
Балл: 0,00
Отметить вопрос

What is the goal of load testing?

a. test the system resistance in the event of a sudden spike of concurrent users

b. validate that the system is able to handle a given load

c. determine how the system works under particular load

d. check robustness of a system in case of extreme load

Правильный ответ

determine how the system works under particular load

Вопрос **2**
Не отвечен
Балл: 0,00
Отметить вопрос

Non-functional testing Parameters, match the following

The extent to which any software system continuously performs the specified functions without failure — Выберите...
The parameter determines the degree to which user can depend on the system during its operation — Выберите...
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand — Выберите...
The parameter checks that the software system continues to function and recovers itself in case of system failure — Выберите...
The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources — Выберите...
The extent with the user can learn, operate, prepare inputs and outputs through interaction with a system — Выберите...

Правильный ответ

The extent to which any software system continuously performs the specified functions without failure — Reliability.
The parameter determines the degree to which user can depend on the system during its operation — Availability.
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand — Scalability.
The parameter checks that the software system continues to function and recovers itself in case of system failure — Recoverability.
The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources — Security.
The extent with the user can learn, operate, prepare inputs and outputs through interaction with a system — Usability.

Вопрос **3**
Не отвечен
Балл: 0,00
Отметить вопрос

What is the goal of load testing?

a. test the system resistance in the event of a sudden spike of concurrent users

b. determine how the system works under particular load

c. validate that the system is able to handle a given load

d. check robustness of a system in case of extreme load

Правильный ответ

validate that the system is able to handle a given load

Вопрос **4**
Не отвечен
Балл: 0,00
Отметить вопрос

In dynamic programming, the technique of storing the previously calculated values is called _____

a. memoization

b. saving value property

c. storing value property

d. mapping

Правильный ответ

memoization

Вопрос **5**
Не отвечен
Балл: 0,00
Отметить вопрос

Match the following

Endurance testing — Выберите...
Load testing — Выберите...
Volume testing — Выберите...
Stress testing — Выберите...
Spike testing — Выберите...

Правильный ответ

Endurance testing — is done to make sure the software can handle the expected load over a long period of time.
Load testing — checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software goes to production.
Stress testing — involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application.
Spike testing — tests the software's reaction to sudden large spikes in the load generated by users

Вопрос **6**
Не отвечен
Балл: 0,00
Отметить вопрос

What is the complexity of merge sort algorithm? Write without spaces, ensy size N.

Ответ:

Правильный ответ: O(NlogN)

Вопрос **7**
Не отвечен
Балл: 0,00
Отметить вопрос

On-chat device the dynamic memory is located:

a. Hard Drive
b. Processor
c. RAM
d. ROM
e. CPU

Правильный ответ: RAM

Вопрос **8**
Не отвечен
Балл: 0,00
Отметить вопрос

Performance Testing - is a software testing process used for testing the speed, response time, stability, reliability, scalability and resource usage of a software application under particular workload.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Вопрос **9**
Не отвечен
Балл: 0,00
Отметить вопрос

What of the following is true for array?

a. We can insert elements only from 1 and
b. We can insert elements at the mid
c. We can access any elements anytime with complexity O(1)
d. We can easily erase elements from the beginning
e. We can insert elements from both ends

Правильный ответ: We can access any elements anytime with complexity O(1)

Вопрос **10**
Не отвечен
Балл: 0,00
Отметить вопрос

Memory given up by the CS at the beginning of program run, that always has the same size?

a. Heap
b. Hash
c. Dynamic Memory
d. Static Memory
e. Rand

Правильный ответ: Static Memory

Вопрос **11**
Не отвечен
Балл: 0,00
Отметить вопрос

A dynamic programming algorithm solves each sub-problem just once and then saves its answer in a table, thereby avoiding the work of recomputing the answer every time it solves each sub-problem.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Вопрос **12**
Не отвечен
Балл: 0,00
Отметить вопрос

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower sub-solutions.

a. Search algorithms
b. Divide and Conquer
c. Brute Force Solution
d. Dynamic Programming
e. Sorting algorithms

Правильный ответ: Dynamic Programming

Вопрос **13**
Не отвечен
Балл: 0,00
Отметить вопрос

Performance Testing Process

a. Plan performance tests, schedule engineers, run code
b. Identify testing environment, run project, making strategy
c. Design project, analyze system, run code
d. Identify testing environment, plan performance tests, analyze, tune and retest

Правильный ответ: Identify testing environment, plan performance tests, analyze, tune and retest

Вопрос **14**
Не отвечен
Балл: 0,00
Отметить вопрос

The dynamic programming technique is similar to the divide and conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Вопрос **15**
Не отвечен
Балл: 0,00
Отметить вопрос

The ___ notation defines an upper bound of an algorithm, it bounds a function only from above.

a. big theta
b. big omega
c. small omega
d. big O

Правильный ответ: big O

Вопрос **16**
Не отвечен
Балл: 0,00
Отметить вопрос

What is Non-functional testing?

a. is defined as a type of Software testing to check whole project parts
b. it is a testing of hardware and software
c. is defined as a type of Software testing to check non-functional aspects.

Правильный ответ: is defined as a type of Software testing to check non-functional aspects.

Вопрос **17**
Не отвечен
Балл: 0,00
Отметить вопрос

What is Linear Programming?

a. Instance simplification is transforming an instance of a problem to an instance of the same problem with some special property that makes the problem easier to solve
b. Linear programming involves optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.
c. The problem is one that asks for the number of a digraph is an order such that for every edge of the digraph, the vertex it starts at is listed before the vertex it points to.
   - Dynamic programming is a technique for solving problems with overlapping sub-problems
   - Typically, these sub-problems arise from a recurrence relating a solution to a given problem with solutions to its smaller sub-problems of the same type
   - Dynamic programming suggests solving each smaller sub-problem once and recording the results in a table from which a solution to the original problem can be then obtained

Правильный ответ: Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Вопрос **18**
Не отвечен
Балл: 0,00
Отметить вопрос

Which of the following do we call the types of algorithms?

a. Greedy algorithms
b. Brute Force Solution
c. Binary algorithms
d. Sorting algorithms
e. Tree algorithms
f. Divide and Conquer
g. Dynamic Programming
h. Search algorithms

Правильный ответ: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **19**
Не отвечен
Балл: 0,00
Отметить вопрос

What of the following is true for stack?

a. We can insert elements at the mid
b. We can access any elements anytime with complexity O(1)
c. We can insert elements from both ends
d. We can insert elements only from 1 and
e. We can easily erase elements from the beginning

Правильный ответ: We can insert elements only from 1 and

Вопрос **20**
Не отвечен
Балл: 0,00
Отметить вопрос

Which system attributes define Non-functional requirements?

a. security, reliability, performance, maintainability, scalability, usability

b. security, reliability, performance, maintainability, loading time

c. security, memorization, performance, maintainability, scalability, usability

d. security, reliability, utilization, maintainability, scalability, usability

Правильный ответ

security, reliability, performance, maintainability, scalability, usability

Вопрос **21**
Не отвечен
Балл: 0,00
Отметить вопрос

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower sub-solutions.

a. Search algorithms
b. Dynamic Programming
c. Brute Force Solution
d. Divide and Conquer
e. Sorting algorithms

Правильный ответ: Divide and Conquer

Вопрос **22**
Не отвечен
Балл: 0,00
Отметить вопрос

Choose which functional role best describes responsibility Facilitating and coordinating all schedules related to SDLC phases and infrastructure

a. Performance Engineer

b. Project Manager

c. Performance Engineering Lead

d. Monitoring Support

Правильный ответ

Project Manager

Вопрос **23**
Не отвечен
Балл: 0,00
Отметить вопрос

Which one is the definition of Performance Testing?

a. set to tests and strategies which are applied to any software program, application, or API, to correct any flaws

b. programming code specific to performance testing to automate the real-world user behavior

c. prepare for performance test execution, execution performance test and analyze it

d. type of testing of Software to check non-functional aspects.

Правильный ответ

set to tests and strategies which are applied to any software program, application, or API, to correct any flaws

Вопрос **24**
Не отвечен
Балл: 0,00
Отметить вопрос

What is the complexity of quick sort algorithm in worst case? Write without spaces, ensy size N.

Ответ:

Правильный ответ: O(N^N)

Вопрос **25**
Не отвечен
Балл: 0,00
Отметить вопрос

What of the following is true for list?

a. We can insert elements from both ends
b. We can insert elements only from 1 and
c. We can access any elements anytime with complexity O(1)
d. We can insert elements at the mid

Правильный ответ: We can insert elements from both ends, We can insert elements at the mid

Вопрос **26**
Не отвечен
Балл: 0,00
Отметить вопрос

Which one is incorrect performance test case?

a. Check database execution time when 500 records are inserted/updated simultaneously

b. Check CPU and memory usage of the application and the database server under peak load conditions

c. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow

d. Verify design of the application, it is easy to use

e. Verify response time is not more than 2 secs when 1000 users access the website simultaneously

f. Check the maximum number of users that the application can handle before it crashes

Правильный ответ

Verify design of the application, it is easy to use

Вопрос **27**
Не отвечен
Балл: 0,00
Отметить вопрос

Dynamic Programming is mainly an optimization over plain recursion.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Вопрос **28**
Не отвечен
Балл: 0,00
Отметить вопрос

A Boolean variable can take on only 1 value.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **29**
Не отвечен
Балл: 0,00
Отметить вопрос

Which of the following sorting algorithms for a typical implementation gives the best performance when applied on an array which is sorted or almost sorted?

a. Priority queue
b. Merge sort
c. Merge
d. Insertion sort

Правильный ответ

Insertion sort

Вопрос **30**
Не отвечен
Балл: 0,00
Отметить вопрос

The change making problem can be solved by dynamic programming.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Вы сделали вход как Zuleikha Sadykova (Выйти из системы)
Software Performance Analysis | Sadykova Zuleikha
Сбросить разделение ролевых
Вы получаете уведомления с этого сервера.

Тест начат	Среда, 25 Май 2022, 00:23
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:23
Прошло времени	16 сек.
Баллы	1,00/30,00
Оценка	**3,33** из 100,00

Вопрос **1**

Неверно

Баллов: 0,00 из 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

a. Greedy algorithm ✖

b. Dynamic Programming

c. Big Oh notation

d. Divide and conquer

Правильный ответ:
Big Oh notation

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

Which system attributes define Non functional requirements?

a. security, reliability, performance, maintainability, scalability, usability ✔

b. security, reliability, utilization, maintainability, scalability, usability

c. security, reliability, performance, maintainability, loading time

d. security, memorization, performance, maintainability, scalability, usability

Правильный ответ:

security, reliability, performance, maintainability, scalability, usability

Вопрос **3**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Facilitating and coordinating all schedules related to SDLC phases and infrastructure

- a. Performance Engineering Lead
- b. Project Manager
- c. Monitoring Support
- d. Performance Engineer

Правильный ответ:

Project Manager

Вопрос **4**

Нет ответа

Балл: 1,00

What of the following is true for list?

- a. We can insert elements from both ends
- b. We can insert elements at the mid
- c. We can insert elements only from 1 end
- d. We can access any elements anytime with complexity O(1)

Правильные ответы: We can insert elements from both ends, We can insert elements at the mid

Вопрос **5**

Нет ответа

Балл: 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower size solutions.

- a. Divide and Conquer
- b. Sorting algorithms
- c. Dynamic Programming
- d. Search algorithms
- e. Brute Force Solution

Правильный ответ: Dynamic Programming

Вопрос **6**

Нет ответа

Балл: 1,00

Match the following

number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage	Выберите...
an amount of time processor spends executing non-idle threads	Выберите...
amount of physical memory available to processes on a computer	Выберите...
shows the bits per second used by a network interface	Выберите...
amount of time disk is busy executing a read or write request	Выберите...
amount of virtual memory used	Выберите...

Правильный ответ:
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,

an amount of time processor spends executing non-idle threads → Processor Usage,

amount of physical memory available to processes on a computer → Memory use,

shows the bits per second used by a network interface → Bandwidth,

amount of time disk is busy executing a read or write request → Disk time,

amount of virtual memory used → Committed memory

Вопрос **7**

Нет ответа

Балл: 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **8**

Нет ответа

Балл: 1,00

What do you mean by "Programming" in the context of Dynamic Programming?

- a. multiplication
- b. Always a least-weight edge
- c. Merge sort
- d. A tabular method

Правильный ответ:
A tabular method

Вопрос **9**

Нет ответа

Балл: 1,00

The basic parameters monitored during performance testing include - Processor Usage

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **10**

Нет ответа

Балл: 1,00

If a problem can be solved by combining optimal solutions to non-overlapping problems, the strategy is called _____

- a. iteration
- b. dynamic programming
- c. recursion
- d. greedy
- e. divide and conquer

Правильный ответ:
divide and conquer

Вопрос **11**

Нет ответа

Балл: 1,00

What is the complexity of merge sort algorithm? Write without spaces, array size N.

Ответ:

Правильный ответ: O(NlogN)

Вопрос **12**

Нет ответа

Балл: 1,00

Memory that is allocated by program at the runtime by requesting from OS?

- a. RAM
- b. Hash
- c. Heap
- d. Dynamic Memory
- e. Static Memory

Правильный ответ: Dynamic Memory

Вопрос **13**

Нет ответа

Балл: 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Incremental approach
- b. f2 ,f4, f3, f1
- c. False
- d. Dynamic programming

Правильный ответ:
Dynamic programming

Вопрос **14**

Нет ответа

Балл: 1,00

Improve and enhance knowledge of the product behavior and technologies in use

- a. non functional testing
- b. performance analysis
- c. analysing data

Правильный ответ:
non functional testing

Вопрос **15**

Нет ответа

Балл: 1,00

Which one is the definition of NFT?

- a. prepares for performance test execution, executes performance test and analyze it
- b. programming code specific to performance testing to automate the real-world user behavior
- c. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.
- d. type of testing of Software to check non-functional aspects

Правильный ответ:

type of testing of Software to check non-functional aspects

Вопрос **16**

Нет ответа

Балл: 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **17**

Нет ответа

Балл: 1,00

Memory given us by the OS at the beginning of program run, that allways has the same size?

- a. Hash
- b. Heap
- c. Static Memory
- d. Dynamic Memory
- e. RAM

Правильный ответ: Static Memory

Вопрос **18**

Нет ответа

Балл: 1,00

Match the following

Scalability	Выберите...
Speed	Выберите...
Stability	Выберите...

Правильный ответ:
Scalability → Determines maximum user load the software application can handle,

Speed → Determines whether the application responds quickly,

Stability → Determines if the application is stable under varying loads

Вопрос **19**

Нет ответа

Балл: 1,00

How many permutations of elements for set with size N exist? Write without spaces.

Ответ: ✖

Правильный ответ: N!

Вопрос **20**

Нет ответа

Балл: 1,00

Which one is the definition of Performance Engineer?

- a. type of testing of Software to check non-functional aspects
- b. prepares for performance test execution, executes performance test and analyze it
- c. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws
- d. programming code specific to performance testing to automate the real-world user behavior

Правильный ответ:

prepares for performance test execution, executes performance test and analyze it

Вопрос **21**

Нет ответа

Балл: 1,00

Quick sort, like merge sort, applies the

- a. Always a least-weight edge
- b. divide-and-conquer paradigm
- c. minimum of any edge satisfying the property
- d. gives us an upper bound on the running time for any input

Правильный ответ:
divide-and-conquer paradigm

Вопрос **22**

Нет ответа

Балл: 1,00

On that device the static memory is located.

- a. CPU
- b. Processor
- c. RAM
- d. GPU
- e. Hard Drive

Правильный ответ: RAM

Вопрос **23**

Нет ответа

Балл: 1,00

Which are part of the steps at each level of recursion?

- a. conquer
- b. combine
- c. all of the above
- d. divide

Правильный ответ:
all of the above

Вопрос **24**

Нет ответа

Балл: 1,00

An algorithm is a well-defined sequence of steps used to solve a well-defined problem in finite time

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **25**

Нет ответа

Балл: 1,00

Which of the following do we call the types of algorithms?

- a. Dynamic Programming
- b. Sorting algorithms
- c. Binary algorithms
- d. Tree algorithms
- e. Search algorithms
- f. Divide and Conquer
- g. Brute Force Solution
- h. Greedy algorithms

Правильные ответы: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **26**

Нет ответа

Балл: 1,00

What of the following is true for queue?

- a. We can access any elements anytime with complexity O(1)
- b. We can insert elements only from 1 end
- c. We can easily erase elements from the beginning
- d. We can insert elements from both ends

Правильные ответы: We can insert elements only from 1 end, We can easily erase elements from the beginning

Вопрос **27**

Нет ответа

Балл: 1,00

Non-functional testing Parameters, match the following

efficiency	Выберите...
interoperability	Выберите...
portability	Выберите...
flexibility	Выберите...

Правильный ответ:
efficiency → The extent to which any software system can handles capacity, quantity and response time,

interoperability → This non-functional parameter checks a software system interfaces with other software systems,
portability → The flexibility of software to transfer from its current hardware or software environment,

flexibility → The term refers to the ease with which the application can work in different hardware and software configurations

Вопрос **28**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Supports performance test execution as configuration or application issues are found

- a. Monitoring Support
- b. Application Support
- c. Performance Engineering Lead
- d. Project Manager

Правильный ответ:
Application Support

Вопрос **29**

Нет ответа

Балл: 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. A Directed Acyclic Graph ie a graph with no cycles
- b. 1. sorted

  2. decrease-by-a-constant-factor
- c. Euclid's algorithm, interpolation search, Nim... etc
- d. 1. Warshall's
  2. Floyd's

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **30**

Нет ответа

Балл: 1,00

Which of the following statement(s) is TRUE?

- a. A hash function takes a message of arbitrary length and generates a fixed length code.
- b. A hash function may give the same hash value for distinct messages.
- c. A hash function takes a message of fixed length and generates a code of variable length.

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:26
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:26
Прошло времени	13 сек.
Баллы	0,00/30,00
Оценка	**0,00** из 100,00

Вопрос **1**

Нет ответа

Балл: 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

- a. Greedy algorithm
- b. Big Oh notation
- c. Dynamic Programming
- d. Divide and conquer

Правильный ответ:
Big Oh notation

Вопрос **2**

Нет ответа

Балл: 1,00

Performance Engineering is the process

- a. by which software is analyzed and will work faster
- b. by which software should be runned
- c. by which software is tested and tuned with the intent of realizing the required performance

Правильный ответ:
by which software is tested and tuned with the intent of realizing the required performance

Вопрос **3**

Нет ответа

Балл: 1,00

What is the goal of spike testing?

a. validate that the system is able to handle a given load

b. check robustness of a system in case of extreme load

c. test the system resistance in the event of a sudden spike of concurrent users

d. determine how the system works under particular load

Правильный ответ:

test the system resistance in the event of a sudden spike of concurrent users

Вопрос **4**

Нет ответа

Балл: 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Thernary Search
- b. Sieve of Erathosphenes
- c. Merge Sort
- d. Binary Search

Правильный ответ: Thernary Search

Вопрос **5**

Нет ответа

Балл: 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower size solutions.

- a. Search algorithms
- b. Brute Force Solution
- c. Sorting algorithms
- d. Dynamic Programming
- e. Divide and Conquer

Правильный ответ: Dynamic Programming

Вопрос **6**

Нет ответа

Балл: 1,00

What of the following is true for stack?

- a. We can access any elements anytime with complexity O(1)
- b. We can insert elements from both ends
- c. We can easily erase elements from the beginning
- d. We can insert elements only from 1 end
- e. We can insert elements at the mid

Правильный ответ: We can insert elements only from 1 end

Вопрос **7**

Нет ответа

Балл: 1,00

Which is NOT an example of Non-functional requirements?

a. CPU Utilization

b. The number of users handled by the application

c. Page response time

d. Request Utilization

Правильный ответ:

Request Utilization

Вопрос **8**

Нет ответа

Балл: 1,00

On that device the dynamic memory is located.

- a. Hard Drive
- b. GPU
- c. Processor
- d. CPU
- e. RAM

Правильный ответ: RAM

Вопрос **9**

Нет ответа

Балл: 1,00

What is the complexity of quick sort algorithm in worst case? Write without spaces, array size N.

Ответ:

Правильный ответ: O(N N)

Вопрос **10**

Нет ответа

Балл: 1,00

Improve and enhance knowledge of the product behavior and technologies in use

- a. performance analysis
- b. non functional testing
- c. analysing data

Правильный ответ:
non functional testing

Вопрос **11**

Нет ответа

Балл: 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **12**

Нет ответа

Балл: 1,00

Which one is the definition of Performance Engineer?

- a. programming code specific to performance testing to automate the real-world user behavior
- b. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws
- c. type of testing of Software to check non-functional aspects
- d. prepares for performance test execution, executes performance test and analyze it

Правильный ответ:

prepares for performance test execution, executes performance test and analyze it

Вопрос **13**

Нет ответа

Балл: 1,00

In dynamic programming, the technique of storing the previously calculated values is called _____

- a. memoization
- b. storing value property
- c. saving value property
- d. mapping

Правильный ответ:
memoization

Вопрос **14**

Нет ответа

Балл: 1,00

Performance Testing - is a software testing process used for testing the speed, response time, stability, reliability, scalability and resource usage of a software application under particular workload.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **15**

Нет ответа

Балл: 1,00

Performance Engineering aims are to optimize the most important application performance trait i.e. user experience.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **16**

Нет ответа

Балл: 1,00

What is the goal of soak testing?

a. determine how the system works under particular load

b. check robustness of a system in case of extreme load

c. test the system resistance in the event of a sudden spike of concurrent users

d. validate that the system is able to handle a given load

Правильный ответ:

determine how the system works under particular load

Вопрос **17**

Нет ответа

Балл: 1,00

What is Linear Programming?

a. The problem is one that asks to list vertices of a digraph in an order such that for every edge of the digraph, the vertex it starts at is listed before the vertex it points to.

b. - Dynamic programming is a technique for solving problems with overlapping sub-problems

- Typically, these sub-problems arise from a recurrence relating a solution to a given problem with solutions to its smaller sub-problems of the same type

- Dynamic programming suggests solving each smaller sub-problem once and recording the results in a table from which a solution to the original problem can be then obtained

c. Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

d. Instance simplification is transforming an instance of a problem to an instance of the same problem with some special property that makes the problem easier to solve.

Правильный ответ:
Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Вопрос **18**

Нет ответа

Балл: 1,00

The change making problem can be solved by dynamic programming

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **19**

Нет ответа

Балл: 1,00

Match the following

Load testing	Выберите...
Stress testing	Выберите...
Spike testing	Выберите...
Endurance testing	Выберите...

Правильный ответ:

Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live,

Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application,

Spike testing → tests the software's reaction to sudden large spikes in the load generated by users,

Endurance testing → is done to make sure the software can handle the expected load over a long period of time

Вопрос **20**

Нет ответа

Балл: 1,00

One of the simplest collision resolution technique is called

- a. discovered
- b. True
- c. collision
- d. chaining

Правильный ответ:
chaining

Вопрос **21**

Нет ответа

Балл: 1,00

What is the complexity of merge sort algorithm? Write without spaces, array size N.

Ответ:

Правильный ответ: O(NlogN)

Вопрос **22**

Нет ответа

Балл: 1,00

Match the following

shows the bits per second used by a network interface	Выберите...
amount of physical memory available to processes on a computer	Выберите...
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage	Выберите...
amount of time disk is busy executing a read or write request	Выберите...
an amount of time processor spends executing non-idle threads	Выберите...
amount of virtual memory used	Выберите...

Правильный ответ:

shows the bits per second used by a network interface → Bandwidth,

amount of physical memory available to processes on a computer → Memory use,

number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,

amount of time disk is busy executing a read or write request → Disk time,

an amount of time processor spends executing non-idle threads → Processor Usage,

amount of virtual memory used → Committed memory

Вопрос **23**

Нет ответа

Балл: 1,00

The problem of weighted interval scheduling can be solved in O(n log n) time using dynamic programming

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **24**

Нет ответа

Балл: 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. f2 ,f4, f3, f1
- b. Incremental approach
- c. False
- d. Dynamic programming

Правильный ответ:
Dynamic programming

Вопрос **25**

Нет ответа

Балл: 1,00

If a problem can be solved by combining optimal solutions to non-overlapping problems, the strategy is called _____

- a. recursion
- b. divide and conquer
- c. greedy
- d. iteration
- e. dynamic programming

Правильный ответ:
divide and conquer

Вопрос **26**

Нет ответа

Балл: 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- a. big omega
- b. big O
- c. small omega
- d. big theta

Правильный ответ:
big O

Вопрос **27**

Нет ответа

Балл: 1,00

Which of the following statement(s) is TRUE?

- a. A hash function takes a message of arbitrary length and generates a fixed length code.
- b. A hash function may give the same hash value for distinct messages.
- c. A hash function takes a message of fixed length and generates a code of variable length.

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Вопрос **28**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Supports and maintains the Performance Test environment

a. Project Manager

b. Monitoring Support

c. Performance Test Environment Support

d. Application Support

Правильный ответ:

Performance Test Environment Support

Вопрос **29**

Нет ответа

Балл: 1,00

Which of the following sorting algorithms for a typical implementation gives the best performance when applied on an array which is sorted or almost sorted?

- a. Merge sort
- b. Merge
- c. Insertion sort
- d. Priority queue

Правильный ответ:
Insertion sort

Вопрос **30**

Нет ответа

Балл: 1,00

What is the goal of load tests?

a. test the system resistance in the event of a sudden spike of concurrent users

b. validate that the system is able to handle a given load

c. determine how the system works under particular load

d. check robustness of a system in case of extreme load

Правильный ответ:

validate that the system is able to handle a given load

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:16
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:22
Прошло времени	5 мин. 55 сек.
Баллы	16,50/30,00
Оценка	**55,00** из 100,00

Вопрос **1**

Частично правильный

Баллов: 0,50 из 1,00

Which of the following algorithms has "divide and conquer" type?

- [x] a. Merge Sort ✔
- [ ] b. Iterating through permutations
- [ ] c. Sieve of Erathosphenes
- [ ] d. Quick Sort

Правильные ответы: Merge Sort, Quick Sort

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

Memory given us by the OS at the beginning of program run, that allways has the same size?

- a. Heap
- b. RAM
- c. Hash
- d. Static Memory ✔
- e. Dynamic Memory

Правильный ответ: Static Memory

Вопрос **3**

Верно

Баллов: 1,00 из 1,00

What is Non Functional testing?

- a. is defined as a type of Software testing to check non-functional aspects ✔
- b. is defined as a type of Software testing to check whole project parts
- c. It is a testing of hardware and software

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **4**

Верно

Баллов: 1,00 из 1,00

An algorithm's execution time is related to the number of _____ it requires

- a. test data sets
- b. parameters
- c. operations ✔
- d. data fields

Правильный ответ:
operations

Вопрос **5**

Верно

Баллов: 1,00 из 1,00

Quick sort, like merge sort, applies the

- a. minimum of any edge satisfying the property
- b. Always a least-weight edge
- c. gives us an upper bound on the running time for any input
- d. divide-and-conquer paradigm ✔

Правильный ответ:
divide-and-conquer paradigm

Вопрос **6**

Верно

Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Facilitating and coordinating all schedules related to SDLC phases and infrastructure

- a. Performance Engineering Lead
- b. Performance Engineer
- c. Project Manager ✔
- d. Monitoring Support

Правильный ответ:

Project Manager

Вопрос **7**

Неверно

Баллов: 0,00 из 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. Euclid's algorithm, interpolation search, Nim... etc
- b. A Directed Acyclic Graph ie a graph with no cycles ✖
- c. 1. Warshall's
  2. Floyd's
- d. 1. sorted

  2. decrease-by-a-constant-factor

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **8**

Верно

Баллов: 1,00 из 1,00

The change making problem can be solved by dynamic programming

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **9**

Неверно

Баллов: 0,00 из 1,00

If a problem can be solved by combining optimal solutions to non-overlapping problems, the strategy is called _____

- a. recursion
- b. iteration
- c. dynamic programming ✘
- d. divide and conquer
- e. greedy

Правильный ответ:
divide and conquer

Вопрос **10**

Верно

Баллов: 1,00 из 1,00

Dynamic Programming is mainly an optimization over plain recursion.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **11**

Верно

Баллов: 1,00 из 1,00

Performance Engineering aims are to optimize the most important application performance trait i.e. user experience.

Выберите один ответ:

- (●) Верно ✔
- ( ) Неверно

Правильный ответ: Верно

Вопрос **12**

Неверно

Баллов: 0,00 из 1,00

Which of the following do we call the types of algorithms?

- [x] a. Sorting algorithms ✖
- [ ] b. Divide and Conquer
- [ ] c. Binary algorithms
- [ ] d. Tree algorithms
- [ ] e. Search algorithms
- [ ] f. Greedy algorithms
- [ ] g. Dynamic Programming
- [ ] h. Brute Force Solution

Правильные ответы: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **13**

Неверно

Баллов: 0,00 из 1,00

On that device the static memory is located.

- ( ) a. RAM
- (●) b. Hard Drive ✖
- ( ) c. GPU
- ( ) d. Processor
- ( ) e. CPU

Правильный ответ: RAM

Вопрос **14**

Неверно

Баллов: 0,00 из 1,00

Which does NOT belong to testing methodology?

- a. analyzing of test results ✖
- b. running the simulation in a large scale
- c. analyzing of simulation
- d. recording a simulation

Правильный ответ:

analyzing of simulation

Вопрос **15**

Верно

Баллов: 1,00 из 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **16**

Верно

Баллов: 1,00 из 1,00

What do you mean by "Programming" in the context of Dynamic Programming?

- a. A tabular method ✔
- b. multiplication
- c. Merge sort
- d. Always a least-weight edge

Правильный ответ:
A tabular method

Вопрос **17**

Верно

Баллов: 1,00 из 1,00

Memory that is allocated by program at the runtime by requesting from OS?

- a. Dynamic Memory ✔
- b. RAM
- c. Heap
- d. Static Memory
- e. Hash

Правильный ответ: Dynamic Memory

Вопрос **18**

Неверно

Баллов: 0,00 из 1,00

Which one is incorrect performance test case?

- a. Check database execution time when 500 records are read/written simultaneously ✖
- b. Check CPU and memory usage of the application and the database server under peak load conditions
- c. Verify response time is not more than 4 secs when 1000 users access the website simultaneously
- d. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
- e. Verify design of the application, is it easy to use
- f. Check the maximum number of users that the application can handle before it crashes

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **19**

Верно

Баллов: 1,00 из 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Thernary Search ✔
- b. Sieve of Erathosphenes
- c. Binary Search
- d. Merge Sort

Правильный ответ: Thernary Search

Вопрос **20**

Неверно

Баллов: 0,00 из 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = 0	f(x) = Theta(g(x))	✖
lim f(x)/g(x) = ConstNonZero	Выберите...	
lim f(x)/g(x) = Infinity	Выберите...	

Правильный ответ: lim f(x)/g(x) = 0 → f(x) = o(g(x)), lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x))

Вопрос **21**

Верно

Баллов: 1,00 из 1,00

Performance Engineering is the process

- a. by which software is tested and tuned with the intent of realizing the required performance ✔
- b. by which software is analyzed and will work faster
- c. by which software should be runned

Правильный ответ:
by which software is tested and tuned with the intent of realizing the required performance

Вопрос **22**

Верно

Баллов: 1,00 из 1,00

A dynamic-programming algorithm solves each sub-problem just once and then saves its answer in a table, thereby avoiding the work of recomputing the answer every time it solves each sub problem.

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **23**

Верно

Баллов: 1,00 из 1,00

Which are part of the steps at each level of recursion?

- a. all of the above ✔
- b. divide
- c. combine
- d. conquer

Правильный ответ:
all of the above

Вопрос **24**

Неверно

Баллов: 0,00 из 1,00

Choose non functional aspects

- a. speed, response time, stability ✖
- b. reliability, scalability and resource usage
- c. performance, usability, reliability
- d. performance, speed, design

Правильный ответ:
performance, usability, reliability

Вопрос **25**

Неверно

Баллов: 0,00 из 1,00

What is the time complexity of the brute force algorithm used to find the longest common subsequence?

- a. O(n) ✖
- b. O(n2)
- c. O(2n)
- d. O(n3)

Правильный ответ:
O(2n)

Вопрос **26**

Неверно

Баллов: 0,00 из 1,00

Types of Performance Testing

- a. Nouse, price, function testing ✖
- b. Spike, volume, nouse testing
- c. Price, speed, level testing
- d. Load, stress, spike testing

Правильный ответ:
Load, stress, spike testing

Вопрос **27**

Частично правильный

Баллов: 0,50 из 1,00

What of the following is true for queue?

- [x] a. We can insert elements only from 1 end ✔
- [ ] b. We can access any elements anytime with complexity O(1)
- [ ] c. We can easily erase elements from the beginning
- [ ] d. We can insert elements from both ends

Правильные ответы: We can insert elements only from 1 end, We can easily erase elements from the beginning

Вопрос **28**

Частично правильный

Баллов: 0,50 из 1,00

What of the following is true for list?

- [x] a. We can insert elements at the mid ✔
- [ ] b. We can insert elements from both ends
- [ ] c. We can access any elements anytime with complexity O(1)
- [ ] d. We can insert elements only from 1 end

Правильные ответы: We can insert elements from both ends, We can insert elements at the mid

Вопрос **29**

Неверно

Баллов: 0,00 из 1,00

One of the simplest collision resolution technique is called

- (●) a. True ✖
- ( ) b. collision
- ( ) c. chaining
- ( ) d. discovered

Правильный ответ:
chaining

Вопрос **30**

Неверно

Баллов: 0,00 из 1,00

Dynamic programming can be applied to common problems like

- (●) a. None of them ✖
- ( ) b. Fibonacci problems
- ( ) c. All of the above
- ( ) d. Finding if a word can be built from a set of strings
- ( ) e. Coin change problem: from a limited set of coins build a specified amount of change
- ( ) f. Assembly line scheduling

Правильный ответ:
All of the above

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:16
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:17
Прошло времени	1 мин. 16 сек.
Баллы	1,00/30,00
Оценка	**3,33** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

On that device the dynamic memory is located.

a. GPU
b. Hard Drive
c. RAM ✔
d. Processor
e. CPU

Правильный ответ: RAM

Вопрос **2**

Неверно

Баллов: 0,00 из 1,00

Type of Software Testing

a. Functional, non functional ✖
b. Functional, non functional, maintenance
c. Non functional, maintenance
d. Analyzing, rateing, maintenance

Правильный ответ:
Functional, non functional, maintenance

Вопрос **3**

Неверно

Баллов: 0,00 из 1,00

Which does NOT belong to testing methodology?

- a. running the simulation in a large scale
- b. analyzing of simulation
- c. recording a simulation
- d. analyzing of test results ✖

Правильный ответ:

analyzing of simulation

Вопрос **4**

Нет ответа

Балл: 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **5**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Manages schedules and activities related to Performance Testing projects

a. Performance Engineering Lead

b. Performance Engineer

c. Project Manager

d. Monitoring Support

Правильный ответ:

Performance Engineering Lead

Вопрос **6**

Нет ответа

Балл: 1,00

What is the goal of soak testing?

a. validate that the system is able to handle a given load

b. check robustness of a system in case of extreme load

c. test the system resistance in the event of a sudden spike of concurrent users

d. determine how the system works under particular load

Правильный ответ:

determine how the system works under particular load

Вопрос **7**

Нет ответа

Балл: 1,00

Non-functional testing Parameters, match the following

The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand	Выберите...
The extent to which any software system continuously performs the specified functions without failure	Выберите...
The parameter determines the degree to which user can depend on the system during its operation	Выберите...
The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources	Выберите...
The parameter checks that the software system continues to function and recovers itself in case of system failure	Выберите...
The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system	Выберите...

Правильный ответ:
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand → Scalability,

The extent to which any software system continuously performs the specified functions without failure → Reliability,

The parameter determines the degree to which user can depend on the system during its operation → Availability,

The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources → Security,

The parameter checks that the software system continues to function and recovers itself in case of system failure → Survivability,

The ease with which the user can learn, operate, prepare inputs and outputs through interaction with a system → Usability

Вопрос **8**

Нет ответа

Балл: 1,00

What is Linear Programming?

a. - Dynamic programming is a technique for solving problems with overlapping sub-problems

   - Typically, these sub-problems arise from a recurrence relating a solution to a given problem with solutions to its smaller sub-problems of the same type

   - Dynamic programming suggests solving each smaller sub-problem once and recording the results in a table from which a solution to the original problem can be then obtained

b. Instance simplification is transforming an instance of a problem to an instance of the same problem with some special property that makes the problem easier to solve.

c. The problem is one that asks to list vertices of a digraph in an order such that for every edge of the digraph, the vertex it starts at is listed before the vertex it points to.

d. Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Правильный ответ:
Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Вопрос **9**

Нет ответа

Балл: 1,00

What is Non Functional testing?

- a. It is a testing of hardware and software
- b. is defined as a type of Software testing to check non-functional aspects
- c. is defined as a type of Software testing to check whole project parts

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **10**

Нет ответа

Балл: 1,00

Memory that is allocated by program at the runtime by requesting from OS?

- a. RAM
- b. Heap
- c. Hash
- d. Static Memory
- e. Dynamic Memory

Правильный ответ: Dynamic Memory

Вопрос **11**

Нет ответа

Балл: 1,00

Types of Performance Testing

- a. Spike, volume, nouse testing
- b. Price, speed, level testing
- c. Load, stress, spike testing
- d. Nouse, price, function testing

Правильный ответ:
Load, stress, spike testing

Вопрос **12**

Нет ответа

Балл: 1,00

Which one is incorrect performance test case?

- a. Check the maximum number of users that the application can handle before it crashes
- b. Check CPU and memory usage of the application and the database server under peak load conditions
- c. Verify response time is not more than 4 secs when 1000 users access the website simultaneously
- d. Verify design of the application, is it easy to use
- e. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
- f. Check database execution time when 500 records are read/written simultaneously

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **13**

Нет ответа

Балл: 1,00

What is the goal of spike testing?

- a. determine how the system works under particular load
- b. validate that the system is able to handle a given load
- c. test the system resistance in the event of a sudden spike of concurrent users
- d. check robustness of a system in case of extreme load

Правильный ответ:

test the system resistance in the event of a sudden spike of concurrent users

Вопрос **14**

Нет ответа

Балл: 1,00

How do we denote constant complexity with O notation? Write without spaces.

Ответ: ✖

Правильный ответ: O(1)

Вопрос **15**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Monitors performance tests using Performance monitors

- a. Project Manager
- b. Monitoring Support
- c. Performance Engineering Lead
- d. Performance Engineer

Правильный ответ:
Monitoring Support

Вопрос **16**

Нет ответа

Балл: 1,00

Dynamic programming can be applied to common problems like

- a. None of them
- b. Fibonacci problems
- c. Coin change problem: from a limited set of coins build a specified amount of change
- d. Assembly line scheduling
- e. All of the above
- f. Finding if a word can be built from a set of strings

Правильный ответ:
All of the above

Вопрос **17**

Нет ответа

Балл: 1,00

With all equal-sized intervals, a greedy algorithm based on earliest start time will always select the maximum number of compatible intervals

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **18**

Нет ответа

Балл: 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower size solutions.

- a. Search algorithms
- b. Brute Force Solution
- c. Dynamic Programming
- d. Sorting algorithms
- e. Divide and Conquer

Правильный ответ: Divide and Conquer

Вопрос **19**

Нет ответа

Балл: 1,00

Which one is an approach for solving a problem by selecting the best option available at the moment

- a. Greedy algorithm
- b. Big Oh notation
- c. Divide and conquer algorithm
- d. Dynamic Programming

Правильный ответ:
Greedy algorithm

Вопрос **20**

Нет ответа

Балл: 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- a. big O
- b. small omega
- c. big omega
- d. big theta

Правильный ответ:
big O

Вопрос **21**

Нет ответа

Балл: 1,00

Scalability testing is done to make sure the software can handle the expected load over a long period of time

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **22**

Нет ответа

Балл: 1,00

Choose non functional aspects

- a. speed, response time, stability
- b. performance, usability, reliability
- c. performance, speed, design
- d. reliability, scalability and resource usage

Правильный ответ:
performance, usability, reliability

Вопрос **23**

Нет ответа

Балл: 1,00

If we divide an array into groups of 3, find the median of each group, recursively find the median of those medians, partition, and recurse, then we can obtain a linear-time median-finding algorithm

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **24**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Supports performance test execution as configuration or application issues are found

- a. Application Support
- b. Performance Engineering Lead
- c. Monitoring Support
- d. Project Manager

Правильный ответ:
Application Support

Вопрос **25**

Нет ответа

Балл: 1,00

On that device the static memory is located.

- a. Hard Drive
- b. Processor
- c. CPU
- d. GPU
- e. RAM

Правильный ответ: RAM

Вопрос **26**

Нет ответа

Балл: 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Dynamic programming
- b. f2 ,f4, f3, f1
- c. False
- d. Incremental approach

Правильный ответ:
Dynamic programming

Вопрос **27**

Нет ответа

Балл: 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

- a. Dynamic Programming
- b. Big Oh notation
- c. Divide and conquer
- d. Greedy algorithm

Правильный ответ:
Big Oh notation

Вопрос **28**

Нет ответа

Балл: 1,00

What is the complexity of quick sort algorithm in worst case? Write without spaces, array size N.

Ответ: ✖

Правильный ответ: O(N N)

Вопрос **29**

Нет ответа

Балл: 1,00

In the potential method for amortized analysis, the potential energy should never go negative

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **30**

Нет ответа

Балл: 1,00

Which are part of the steps at each level of recursion?

- a. divide
- b. all of the above
- c. combine
- d. conquer

Правильный ответ:
all of the above

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:13
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:23
Прошло времени	10 мин. 11 сек.
Баллы	22,33/30,00
Оценка	**74,44** из 100,00

Вопрос **1**
Неверно
Баллов: 0,00 из 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower size solutions.

a. Search algorithms
b. Brute Force Solution
c. Dynamic Programming ✖
d. Sorting algorithms
e. Divide and Conquer

Правильный ответ: Divide and Conquer

Вопрос **2**
Неверно
Баллов: 0,00 из 1,00

Type of Software Testing

a. Non functional, maintenance
b. Analyzing, rateing, maintenance
c. Functional, non functional, maintenance
d. Functional, non functional ✖

Правильный ответ:
Functional, non functional, maintenance

Вопрос **3**
Верно
Баллов: 1,00 из 1,00

Which one is the definition of Performance Test Script?

a. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.

b. prepares for performance test execution, executes performance test and analyze it

c. programming code specific to performance testing to automate the real-world user behavior ✔

d. type of testing of Software to check non-functional aspects

Правильный ответ:

programming code specific to performance testing to automate the real-world user behavior

Вопрос **4**
Неверно
Баллов: 0,00 из 1,00

What is the goal of soak testing?

a. determine how the system works under particular load

b. test the system resistance in the event of a sudden spike of concurrent users

c. check robustness of a system in case of extreme load ✖

d. validate that the system is able to handle a given load

Правильный ответ:

determine how the system works under particular load

Вопрос **5**
Верно
Баллов: 1,00 из 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

Верно ✔

Неверно

Правильный ответ: Верно

Вопрос **6**
Частично правильный
Баллов: 0,33 из 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = ConstNonZero	f(x) = Theta(g(x))	✖
lim f(x)/g(x) = 0	f(x) = o(g(x))	✔

lim f(x)/g(x) = Infinity f(x) = O(g(x)) ✖

Правильный ответ: lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x)), lim f(x)/g(x) = 0 → f(x) = o(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x))

Вопрос **7**
Верно
Баллов: 1,00 из 1,00

Which one is an algorithm which recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly?

- a. Greedy algorithm
- b. Divide and conquer algorithm ✔
- c. Dynamic Programming
- d. Big Oh notation

Правильный ответ:

Divide and conquer algorithm

Вопрос **8**
Неверно
Баллов: 0,00 из 1,00

What is the height of full binary tree if the total number of elements in it is N? Write in O notation without spaces. log2(n+´ ✖ .

Правильный ответ: O(log(N))

Вопрос **9**
Верно
Баллов: 1,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Incremental approach
- b. False
- c. f2 ,f4, f3, f1
- d. Dynamic programming ✔

Правильный ответ:
Dynamic programming

Вопрос **10**
Верно
Баллов: 1,00

Which one is an approach for solving a problem by selecting the best option available at the moment

- a. Dynamic Programming

из 1,00

a. Dynamic Programming

b. Greedy algorithm ✔

c. Big Oh notation

d. Divide and conquer algorithm

Правильный ответ:
Greedy algorithm

Вопрос **11**
Верно
Баллов: 1,00 из 1,00

Dynamic programming can be applied to common problems like

a. Fibonacci problems

b. Coin change problem: from a limited set of coins build a specified amount of change

c. All of the above ✔

d. Assembly line scheduling

e. Finding if a word can be built from a set of strings

f. None of them

Правильный ответ:
All of the above

Вопрос **12**
Верно
Баллов: 1,00 из 1,00

Performance Testing - is a software testing process used for testing the speed, response time, stability, reliability, scalability and resource usage of a software application under particular workload.

Выберите один ответ:

Верно ✔

Неверно

Правильный ответ: Верно

Вопрос **13**
Верно
Баллов: 1,00 из 1,00

Which of the following statement(s) is TRUE?

a. A hash function may give the same hash value for distinct messages.

b. A hash function takes a message of fixed length and generates a code of variable length.

c. A hash function takes a message of arbitrary length and generates a fixed length code. ✔

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Вопрос **14**
Неверно
Баллов: 0,00 из 1,00

What of the following is true for list?

- [x] a. We can insert elements only from 1 end ✖
- [ ] b. We can insert elements from both ends
- [ ] c. We can access any elements anytime with complexity O(1)
- [ ] d. We can insert elements at the mid

Правильные ответы: We can insert elements from both ends, We can insert elements at the mid

Вопрос **15**
Верно
Баллов: 1,00 из 1,00

An algorithm is a well-defined sequence of steps used to solve a well-defined problem in finite time

Выберите один ответ:

- (•) Верно ✔
- ( ) Неверно

Правильный ответ: Верно

Вопрос **16**
Верно
Баллов: 1,00 из 1,00

Choose which functional role best describes responsibility: Prepares for performance test execution, executes performance tests, analyzes performance tests, and tracks problem reports

- ( ) a. Project Manager
- ( ) b. Performance Engineering Lead
- ( ) c. Monitoring Support
- (•) d. Performance Engineer ✔

Правильный ответ:
Performance Engineer

Вопрос **17**
Верно
Баллов: 1,00 из 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- (•) a. big O ✔
- ( ) b. big theta
- ( ) c. small omega
- ( ) d. big omega

Правильный ответ:
big O

Вопрос **18**

Вопрос 18
Верно
Баллов: 1,00 из 1,00

In the potential method for amortized analysis, the potential energy should never go negative

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **19**
Верно
Баллов: 1,00 из 1,00

The problem of weighted interval scheduling can be solved in O(n log n) time using dynamic programming

Выберите один ответ:

- Верно ✔
- Неверно

Правильный ответ: Верно

Вопрос **20**
Верно
Баллов: 1,00 из 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

- a. Dynamic Programming
- b. Divide and conquer
- c. Big Oh notation ✔
- d. Greedy algorithm

Правильный ответ:
Big Oh notation

Вопрос **21**
Верно
Баллов: 1,00 из 1,00

What is Non Functional testing?

- a. It is a testing of hardware and software
- b. is defined as a type of Software testing to check whole project parts
- c. is defined as a type of Software testing to check non-functional aspects ✔

Правильный ответ:
is defined as a type of Software testing to check non-functional aspects

Вопрос **22**
Верно
Баллов: 1,00 из 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. 1. Warshall's
  2. Floyd's

b. 1. sorted

2. decrease-by-a-constant-factor

c. Euclid's algorithm, interpolation search, Nim... etc

d. A Directed Acyclic Graph ie a graph with no cycles

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **23**
Верно
Баллов: 1,00 из 1,00

Which are part of the steps at each level of recursion?

a. conquer

b. combine

c. divide

d. all of the above ✔

Правильный ответ:
all of the above

Вопрос **24**
Верно
Баллов: 1,00 из 1,00

What is the complexity of quick sort algorithm in worst case? Write without spaces, array size N.

Ответ: O(N2) ✔

Правильный ответ: O(N N)

Вопрос **25**
Неверно
Баллов: 0,00 из 1,00

Memory given us by the OS at the beginning of program run, that allways has the same size?

a. RAM ✘

b. Dynamic Memory

c. Hash

d. Heap

e. Static Memory

Правильный ответ: Static Memory

Вопрос **26**
Верно
Баллов: 1,00 из 1,00

How do we denote constant complexity with O notation? Write without spaces.

Ответ: O(1) ✔

Правильный ответ: O(1)

Вопрос **27**
Верно
Баллов: 1,00 из 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:
- Верно
- Неверно ✔

Правильный ответ: Неверно

Вопрос **28**
Неверно
Баллов: 0,00 из 1,00

An algorithm's execution time is related to the number of _____ it requires

- a. test data sets
- b. operations
- c. data fields ✖
- d. parameters

Правильный ответ:
operations

Вопрос **29**
Верно
Баллов: 1,00 из 1,00

Match the following

Endurance testing ✔	is done to make sure the software can handle the expected load over a long period of time
Stress testing ✔	involves testing an application under extreme workloads to see how it handles high traffic or data proc
Spike testing ✔	tests the software's reaction to sudden large spikes in the load generated by users
Load testing ✔	checks the application's ability to perform under anticipated user loads. The objective is to identify per

Правильный ответ:
Endurance testing → is done to make sure the software can handle the expected load over a long period of time,

Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application,

Spike testing → tests the software's reaction to sudden large spikes in the load generated by users,

Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live

Вопрос **30**

Верно

Баллов: 1,00 из 1,00

Array located in dynamic memory?

- a. Dynamic object
- b. Allocated array
- c. Pointer
- d. Dynamic array ✔
- e. vector

Правильный ответ: Dynamic array

◀ preparation for final

Перейти на...

week 1 tasks ▶

Тест начат	Среда, 25 Май 2022, 00:12
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:15
Прошло времени	2 мин. 55 сек.
Баллы	3,00/30,00
Оценка	**10,00** из 100,00

Вопрос **1**

Верно

Баллов: 1,00 из 1,00

Array located in dynamic memory?

- a. Allocated array
- b. Dynamic object
- c. Dynamic array ✔
- d. Pointer
- e. vector

Правильный ответ: Dynamic array

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

Types of Performance Testing

- a. Price, speed, level testing
- b. Nouse, price, function testing
- c. Spike, volume, nouse testing
- d. Load, stress, spike testing ✔

Правильный ответ:
Load, stress, spike testing

Вопрос **3**

Верно

Баллов: 1,00 из 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Dynamic programming ✔
- b. False
- c. Incremental approach
- d. f2 ,f4, f3, f1

Правильный ответ:
Dynamic programming

Вопрос **4**

Нет ответа

Балл: 1,00

Match the following

Stress testing	Выберите...
Spike testing	Выберите...
Endurance testing	Выберите...
Load testing	Выберите...

Правильный ответ:
Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application,

Spike testing → tests the software's reaction to sudden large spikes in the load generated by users,

Endurance testing → is done to make sure the software can handle the expected load over a long period of time,

Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live

Вопрос **5**

Нет ответа

Балл: 1,00

What is the goal of spike testing?

- a. validate that the system is able to handle a given load
- b. determine how the system works under particular load
- c. test the system resistance in the event of a sudden spike of concurrent users
- d. check robustness of a system in case of extreme load

Правильный ответ:

test the system resistance in the event of a sudden spike of concurrent users

Вопрос **6**

Нет ответа

Балл: 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Thernary Search
- b. Binary Search
- c. Sieve of Erathosphenes
- d. Merge Sort

Правильный ответ: Thernary Search

Вопрос **7**

Нет ответа

Балл: 1,00

How do we denote following formulas while (in limit x is tending to infinity)

lim f(x)/g(x) = 0	Выберите...
lim f(x)/g(x) = Infinity	Выберите...
lim f(x)/g(x) = ConstNonZero	Выберите...

Правильный ответ: lim f(x)/g(x) = 0 → f(x) = o(g(x)), lim f(x)/g(x) = Infinity → f(x) = Theta(g(x)), lim f(x)/g(x) = ConstNonZero → f(x) = O(g(x))

Вопрос **8**

Нет ответа

Балл: 1,00

What is the goal of load tests?

a. check robustness of a system in case of extreme load

b. determine how the system works under particular load

c. test the system resistance in the event of a sudden spike of concurrent users

d. validate that the system is able to handle a given load

Правильный ответ:

validate that the system is able to handle a given load

Вопрос **9**

Нет ответа

Балл: 1,00

The basic parameters monitored during performance testing include - Processor Usage

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **10**

Нет ответа

Балл: 1,00

Performance Testing is a discipline

- a. concerned with analyzing design, diagrams, code and need to quick run
- b. concerned with testing and reporting the current performance of a software application under various parameters
- c. concerned with testing and reporting the current performance of a software application with any diagrams

Правильный ответ:
concerned with testing and reporting the current performance of a software application under various parameters

Вопрос **11**

Нет ответа

Балл: 1,00

Which one is incorrect performance test case?

- a. Check CPU and memory usage of the application and the database server under peak load conditions
- b. Verify response time is not more than 4 secs when 1000 users access the website simultaneously
- c. Verify design of the application, is it easy to use
- d. Check the maximum number of users that the application can handle before it crashes
- e. Check database execution time when 500 records are read/written simultaneously
- f. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow

Правильный ответ:
Verify design of the application, is it easy to use

Вопрос **12**

Нет ответа

Балл: 1,00

The running time of an algorithm is the number of instructions it executes when run on a particular instance

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **13**

Нет ответа

Балл: 1,00

What will be the output?

```
using namespace std;

int fib(int n)
{
    if (n <= 1)
        return n;
    return fib(n-1) + fib(n-2);
}

int main ()
{
    int n = 9;
    cout << fib(n);
    getchar();
    return 0;
}
```

- a. 1
- b. 16
- c. 33
- d. 34
- e. 0

Правильный ответ:
34

Вопрос **14**

Нет ответа

Балл: 1,00

Performance Testing Process

- a. Design project, analyze system, run code
- b. Identify testing environment, plan performance tests, analyze, tune and retest
- c. Identify testing environment, run project, making desing
- d. Plan performance tests, solveig algorithms, run code

Правильный ответ:
Identify testing environment, plan performance tests, analyze, tune and retest

Вопрос **15**

Нет ответа

Балл: 1,00

Which one is an algorithmic technique for solving an optimization problem by breaking it down into simpler subproblems and utilizing the fact that the optimal solution to the overall problem depends upon the optimal solution to its subproblems?

- a. Big Oh notation
- b. Greedy algorithms
- c. Divide and conquer algorithm
- d. Dynamic Programming

Правильный ответ:
Dynamic Programming

Вопрос **16**

Нет ответа

Балл: 1,00

Which one is an algorithm which recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly?

a. Greedy algorithm

b. Big Oh notation

c. Divide and conquer algorithm

d. Dynamic Programming

Правильный ответ:

Divide and conquer algorithm

Вопрос **17**

Нет ответа

Балл: 1,00

Which of the following statement(s) is TRUE?

- a. A hash function may give the same hash value for distinct messages.
- b. A hash function takes a message of arbitrary length and generates a fixed length code.
- c. A hash function takes a message of fixed length and generates a code of variable length.

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Вопрос **18**

Нет ответа

Балл: 1,00

Choose non functional aspects

- a. performance, usability, reliability
- b. performance, speed, design
- c. speed, response time, stability
- d. reliability, scalability and resource usage

Правильный ответ:
performance, usability, reliability

Вопрос **19**

Нет ответа

Балл: 1,00

Type of Software Testing

- a. Functional, non functional, maintenance
- b. Analyzing, rateing, maintenance
- c. Non functional, maintenance
- d. Functional, non functional

Правильный ответ:
Functional, non functional, maintenance

Вопрос **20**

Нет ответа

Балл: 1,00

In the merge-sort execution tree, the cost of operations done at each level of the tree is different.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **21**

Нет ответа

Балл: 1,00

Which of the following algorithms has "divide and conquer" type?

- a. Quick Sort
- b. Merge Sort
- c. Iterating through permutations
- d. Sieve of Erathosphenes

Правильные ответы: Merge Sort, Quick Sort

Вопрос **22**

Нет ответа

Балл: 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- a. big O
- b. big omega
- c. big theta
- d. small omega

Правильный ответ:
big O

Вопрос **23**

Нет ответа

Балл: 1,00

Non-functional testing Parameters, match the following

flexibility	Выберите...
efficiency	Выберите...
portability	Выберите...
interoperability	Выберите...

Правильный ответ:
flexibility → The term refers to the ease with which the application can work in different hardware and software configurations,

efficiency → The extent to which any software system can handles capacity, quantity and response time,

portability → The flexibility of software to transfer from its current hardware or software environment,

interoperability → This non-functional parameter checks a software system interfaces with other software systems

Вопрос **24**

Нет ответа

Балл: 1,00

Which system attributes define Non functional requirements?

a. security, reliability, performance, maintainability, loading time

b. security, reliability, utilization, maintainability, scalability, usability

c. security, reliability, performance, maintainability, scalability, usability

d. security, memorization, performance, maintainability, scalability, usability

Правильный ответ:

security, reliability, performance, maintainability, scalability, usability

Вопрос **25**

Нет ответа

Балл: 1,00

Which are part of the steps at each level of recursion?

- a. all of the above
- b. conquer
- c. divide
- d. combine

Правильный ответ:
all of the above

Вопрос **26**

Нет ответа

Балл: 1,00

What is the time complexity of the brute force algorithm used to find the longest common subsequence?

- a. O(n2)
- b. O(n3)
- c. O(n)
- d. O(2n)

Правильный ответ:
O(2n)

Вопрос **27**

Нет ответа

Балл: 1,00

How do we denote constant complexity with O notation? Write without spaces.

Ответ: ✖

Правильный ответ: O(1)

Вопрос **28**

Нет ответа

Балл: 1,00

How many permutations of elements for set with size N exist? Write without spaces.

Ответ:

Правильный ответ: N!

Вопрос **29**

Нет ответа

Балл: 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. A Directed Acyclic Graph ie a graph with no cycles
- b. 1. Warshall's
  2. Floyd's
- c. 1. sorted

  2. decrease-by-a-constant-factor
- d. Euclid's algorithm, interpolation search, Nim... etc

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **30**

Нет ответа

Балл: 1,00

Which of the following sorting algorithms for a typical implementation gives the best performance when applied on an array which is sorted or almost sorted?

- a. Merge sort
- b. Merge
- c. Priority queue
- d. Insertion sort

Правильный ответ:
Insertion sort

◄ preparation for final

Перейти на...

week 1 tasks ►

Software Performance Analysis | Sadykova Zuleikha

Test name	Сатар, 25 Май 2022, 09:21
Состояние	Завершено
Начат	Сатар, 25 Май 2022, 09:21
Завершен	Сатар, 27 Сен 2022, 17:04
Прошедшее время	4 days
Оценка	0.00 из 100.00
Оценка	0.00 из 100.00

Навигация по тесту

Показать одну страницу
Закончить обзор

Question **1**
Not yet answered
Max mark 1.00
P Question text

What is the goal of load testing?

a. test the system resistance in the event of a sudden spike of concurrent users

b. validate that the system is able to handle a given load

c. determine how the system works under particular load

d. check robustness of a system in case of extreme load

Правильный ответ

determine how the system works under particular load

Question **2**
Not yet answered
Max mark 1.00
P Question text

Non-functional testing Parameters, match the following:

The extent to which any software system continuously performs the specified functions without failure — Выберите...
The parameter determines the degree to which user can depend on the system during its operation — Выберите...
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand — Выберите...
The parameter checks that the software system continues to function and recovers itself in case of system failure — Выберите...
The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources — Выберите...
The extent with the user can learn, operate, prepare inputs and outputs through interaction with a system — Выберите...

Правильный ответ

The extent to which any software system continuously performs the specified functions without failure — Reliability.
The parameter determines the degree to which user can depend on the system during its operation — Availability.
The term refers to the degree in which any software application can expand its processing capacity to meet an increase in demand — Scalability.
The parameter checks that the software system continues to function and recovers itself in case of system failure — Recoverability.
The parameter defines how a system is safeguarded against deliberate and sudden attacks from internal and external sources — Security.
The extent with the user can learn, operate, prepare inputs and outputs through interaction with a system — Usability.

Question **3**
Not yet answered
Max mark 1.00
P Question text

What is the goal of load testing?

a. test the system resistance in the event of a sudden spike of concurrent users

b. determine how the system works under particular load

c. validate that the system is able to handle a given load

d. check robustness of a system in case of extreme load

Правильный ответ

validate that the system is able to handle a given load

Question **4**
Not yet answered
Max mark 1.00
P Question text

In dynamic programming, the technique of storing the previously calculated values is called _____

a. memoization

b. saving value property

c. storing value property

d. mapping

Правильный ответ

memoization

Question **5**
Not yet answered
Max mark 1.00
P Question text

Match the following

Endurance testing — Выберите...
Load testing — Выберите...
Stress testing — Выберите...
Spike testing — Выберите...

Правильный ответ

Endurance testing — is done to make sure the software can handle the expected load over a long period of time.
Load testing — checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software goes to production.
Stress testing — involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application.
Spike testing — tests the software's reaction to sudden large spikes in the load generated by users

Question **6**
Not yet answered
Max mark 1.00
P Question text

What is the complexity of merge sort algorithm? Write without spaces, eroy size N.

Ответ:

Правильный ответ: O(NlogN)

Question **7**
Not yet answered
Max mark 1.00
P Question text

On-chat device the dynamic memory is located:

a. Hard Drive
b. Processor
c. RAM
d. ROM
e. CPU

Правильный ответ: RAM

Question **8**
Not yet answered
Max mark 1.00
P Question text

Performance Testing - is a software testing process used for testing the speed, response time, stability, reliability, scalability and resource usage of a software application under particular workload.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Question **9**
Not yet answered
Max mark 1.00
P Question text

What of the following is true for array?

a. We can insert elements only from 1 and
b. We can insert elements at the mid
c. We can access any elements anytime with complexity O(1)
d. We can easily wipe elements from the beginning
e. We can insert elements from both ends

Правильный ответ: We can access any elements anytime with complexity O(1)

Question **10**
Not yet answered
Max mark 1.00
P Question text

Memory given up by the CE at the beginning of program run, that always has the same size?

a. Heap
b. Stack
c. Dynamic Memory
d. Static Memory
e. RAM

Правильный ответ: Static Memory

Question **11**
Not yet answered
Max mark 1.00
P Question text

A dynamic programming algorithm solves each sub-problem just once and then saves its answer in a table, thereby avoiding the work of recomputing the answer every time it solves each sub-problem.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Question **12**
Not yet answered
Max mark 1.00
P Question text

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower sub-solutions.

a. Search algorithms
b. Divide and Conquer
c. Brute Force Solution
d. Dynamic Programming
e. Sorting algorithms

Правильный ответ: Dynamic Programming

Question **13**
Not yet answered
Max mark 1.00
P Question text

Performance Testing Process

a. Plan performance tests, schedule engineers, run code
b. Identify testing environment, run project, making driving
c. Design project, analyze system, run code
d. Identify testing environment, plan performance tests, analyze, tune and retest

Правильный ответ: Identify testing environment, plan performance tests, analyze, tune and retest

Question **14**
Not yet answered
Max mark 1.00
P Question text

The dynamic programming technique is similar to the divide and conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Question **15**
Not yet answered
Max mark 1.00
P Question text

The ___ notation defines an upper bound of an algorithm, it bounds a function only from above.

a. big theta
b. big omega
c. small omega
d. big O

Правильный ответ: big O

Question **16**
Not yet answered
Max mark 1.00
P Question text

What is Non-functional testing?

a. is defined as a type of Software testing to check whole project parts
b. it is a testing of hardware and software
c. is defined as a type of Software testing to check non-functional aspects.

Правильный ответ: is defined as a type of Software testing to check non-functional aspects.

Question **17**
Not yet answered
Max mark 1.00
P Question text

What is Linear Programming?

a. Instance simplification is transforming an instance of a problem to an instance of the same problem with some special property that makes the problem easier to solve
b. Linear programming involves optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.
c. The problem is one that asks for a tour of a digraph in an order such that for every edge of the digraph, the vertex it starts at is listed before the vertex it points to.
   - Dynamic programming is a technique for solving problems with overlapping sub-problems
   - Typically, these sub-problems arise from a recurrence relating a solution to a given problem with solutions to its smaller sub-problems of the same type
   - Dynamic programming suggests solving each smaller sub-problem once and recording the results in a table from which a solution to the original problem can be then obtained

Правильный ответ: Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Question **18**
Not yet answered
Max mark 1.00
P Question text

Which of the following do we call the types of algorithms?

a. Greedy algorithms
b. Brute Force Solution
c. Binary algorithms
d. Sorting algorithms
e. Tree algorithms
f. Divide and Conquer
g. Dynamic Programming
h. Search algorithms

Правильный ответ: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Question **19**
Not yet answered
Max mark 1.00
P Question text

What of the following is true for stack?

a. We can insert elements at the mid
b. We can access any elements anytime with complexity O(1)
c. We can insert elements from both ends
d. We can insert elements only from 1 and
e. We can easily wipe elements from the beginning

Правильный ответ: We can insert elements only from 1 and

Question **20**
Not yet answered
Max mark 1.00
P Question text

Which system attributes define Non functional requirements?

a. security, reliability, performance, maintainability, scalability, usability

b. security, reliability, performance, maintainability, loading time

c. security, memorization, performance, maintainability, scalability, usability

d. security, reliability, utilization, maintainability, scalability, usability

Правильный ответ

security, reliability, performance, maintainability, scalability, usability

Question **21**
Not yet answered
Max mark 1.00
P Question text

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems in a recursive manner mostly without saving values for lower sub-solutions.

a. Search algorithms
b. Dynamic Programming
c. Brute Force Solution
d. Divide and Conquer
e. Sorting algorithms

Правильный ответ: Divide and Conquer

Question **22**
Not yet answered
Max mark 1.00
P Question text

Choose which functional role best describes responsibility Facilitating and coordinating all schedules related to SDLC phases and infrastructure

a. Performance Engineer

b. Project Manager

c. Performance Engineering Lead

d. Monitoring Support

Правильный ответ

Project Manager

Question **23**
Not yet answered
Max mark 1.00
P Question text

Which one is the definition of Performance Testing?

a. set to tests and strategies which are applied to any software program, application, or API, to correct any flaws

b. programming code specific to performance testing to automate the real-world user behavior

c. prepares for performance test execution, executes performance test and analyze it

d. type of testing of Software to check non-functional aspects.

Правильный ответ

set to tests and strategies which are applied to any software program, application, or API, to correct any flaws

Question **24**
Not yet answered
Max mark 1.00
P Question text

What is the complexity of quick sort algorithm in worst case? Write without spaces, eroy size N.

Ответ:

Правильный ответ: O(N N)

Question **25**
Not yet answered
Max mark 1.00
P Question text

What of the following is true for list?

a. We can insert elements from both ends
b. We can insert elements only from 1 and
c. We can access any elements anytime with complexity O(1)
d. We can insert elements at the mid

Правильный ответ: We can insert elements from both ends, We can insert elements at the mid

Question **26**
Not yet answered
Max mark 1.00
P Question text

Which one is incorrect performance test case?

a. Check database execution time when 500 records are inserted/deleted simultaneously
b. Check CPU and memory usage of the application and the database server under peak load conditions
c. Verify response time of the Application Under Load is within an acceptable range when the network connectivity is slow
d. Verify design of the application, it is easy to use
e. Verify response time is not more than 2 secs when 1000 users access the website simultaneously
f. Check the maximum number of users that the application can handle before it crashes

Правильный ответ

Verify design of the application, it is easy to use

Question **27**
Not yet answered
Max mark 1.00
P Question text

Dynamic Programming is mainly an optimization over plain recursion.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Question **28**
Not yet answered
Max mark 1.00
P Question text

A Boolean variable can take on only 1 value.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Неверно

Question **29**
Not yet answered
Max mark 1.00
P Question text

Which of the following sorting algorithms for a typical implementation gives the best performance when applied on an array which is sorted or almost sorted?

a. Priority queue
b. Merge sort
c. Merge
d. Insertion sort

Правильный ответ

Insertion sort

Question **30**
Not yet answered
Max mark 1.00
P Question text

The change making problem can be solved by dynamic programming.

Выберите один ответ:
- Верно
- Неверно

Правильный ответ: Верно

Вы сделали вход как Sadykova Zuleikha (Выйти)
Software Performance Analysis | Sadykova Zuleikha
Сбросить разделение сессии
Вы используете облачную версию Moodle

Тест начат	Среда, 25 Май 2022, 00:23
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:23
Прошло времени	16 сек.
Баллы	1,00/30,00
Оценка	**3,33** из 100,00

Вопрос **1**

Неверно

Баллов: 0,00 из 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

a. Greedy algorithm ✖

b. Dynamic Programming

c. Big Oh notation

d. Divide and conquer

Правильный ответ:
Big Oh notation

Вопрос **2**

Верно

Баллов: 1,00 из 1,00

Which system attributes define Non functional requirements?

a. security, reliability, performance, maintainability, scalability, usability ✔

b. security, reliability, utilization, maintainability, scalability, usability

c. security, reliability, performance, maintainability, loading time

d. security, memorization, performance, maintainability, scalability, usability

Правильный ответ:

security, reliability, performance, maintainability, scalability, usability

Вопрос **3**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Facilitating and coordinating all schedules related to SDLC phases and infrastructure

- a. Performance Engineering Lead
- b. Project Manager
- c. Monitoring Support
- d. Performance Engineer

Правильный ответ:

Project Manager

Вопрос **4**

Нет ответа

Балл: 1,00

What of the following is true for list?

- a. We can insert elements from both ends
- b. We can insert elements at the mid
- c. We can insert elements only from 1 end
- d. We can access any elements anytime with complexity O(1)

Правильные ответы: We can insert elements from both ends, We can insert elements at the mid

Вопрос **5**

Нет ответа

Балл: 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower size solutions.

- a. Divide and Conquer
- b. Sorting algorithms
- c. Dynamic Programming
- d. Search algorithms
- e. Brute Force Solution

Правильный ответ: Dynamic Programming

Вопрос **6**

Нет ответа

Балл: 1,00

Match the following

number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage	Выберите...
an amount of time processor spends executing non-idle threads	Выберите...
amount of physical memory available to processes on a computer	Выберите...
shows the bits per second used by a network interface	Выберите...
amount of time disk is busy executing a read or write request	Выберите...
amount of virtual memory used	Выберите...

Правильный ответ:
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,

an amount of time processor spends executing non-idle threads → Processor Usage,

amount of physical memory available to processes on a computer → Memory use,

shows the bits per second used by a network interface → Bandwidth,

amount of time disk is busy executing a read or write request → Disk time,

amount of virtual memory used → Committed memory

Вопрос **7**

Нет ответа

Балл: 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **8**

Нет ответа

Балл: 1,00

What do you mean by "Programming" in the context of Dynamic Programming?

- a. multiplication
- b. Always a least-weight edge
- c. Merge sort
- d. A tabular method

Правильный ответ:
A tabular method

Вопрос **9**

Нет ответа

Балл: 1,00

The basic parameters monitored during performance testing include - Processor Usage

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **10**

Нет ответа

Балл: 1,00

If a problem can be solved by combining optimal solutions to non-overlapping problems, the strategy is called _____

- a. iteration
- b. dynamic programming
- c. recursion
- d. greedy
- e. divide and conquer

Правильный ответ:
divide and conquer

Вопрос **11**

Нет ответа

Балл: 1,00

What is the complexity of merge sort algorithm? Write without spaces, array size N.

Ответ:

Правильный ответ: O(NlogN)

Вопрос **12**

Нет ответа

Балл: 1,00

Memory that is allocated by program at the runtime by requesting from OS?

- a. RAM
- b. Hash
- c. Heap
- d. Dynamic Memory
- e. Static Memory

Правильный ответ: Dynamic Memory

Вопрос **13**

Нет ответа

Балл: 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. Incremental approach
- b. f2 ,f4, f3, f1
- c. False
- d. Dynamic programming

Правильный ответ:
Dynamic programming

Вопрос **14**

Нет ответа

Балл: 1,00

Improve and enhance knowledge of the product behavior and technologies in use

- a. non functional testing
- b. performance analysis
- c. analysing data

Правильный ответ:
non functional testing

Вопрос **15**

Нет ответа

Балл: 1,00

Which one is the definition of NFT?

- a. prepares for performance test execution, executes performance test and analyze it
- b. programming code specific to performance testing to automate the real-world user behavior
- c. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws.
- d. type of testing of Software to check non-functional aspects

Правильный ответ:

type of testing of Software to check non-functional aspects

Вопрос **16**

Нет ответа

Балл: 1,00

The dynamic programming technique is similar to the divide-and-conquer approach in the way that a problem is divided in smaller, independent sub-problems and the results merged together to form the solution.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **17**

Нет ответа

Балл: 1,00

Memory given us by the OS at the beginning of program run, that allways has the same size?

- a. Hash
- b. Heap
- c. Static Memory
- d. Dynamic Memory
- e. RAM

Правильный ответ: Static Memory

Вопрос **18**

Нет ответа

Балл: 1,00

Match the following

Scalability	Выберите...
Speed	Выберите...
Stability	Выберите...

Правильный ответ:
Scalability → Determines maximum user load the software application can handle,

Speed → Determines whether the application responds quickly,

Stability → Determines if the application is stable under varying loads

Вопрос **19**

Нет ответа

Балл: 1,00

How many permutations of elements for set with size N exist? Write without spaces.

Ответ: ✖

Правильный ответ: N!

Вопрос **20**

Нет ответа

Балл: 1,00

Which one is the definition of Performance Engineer?

- a. type of testing of Software to check non-functional aspects
- b. prepares for performance test execution, executes performance test and analyze it
- c. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws
- d. programming code specific to performance testing to automate the real-world user behavior

Правильный ответ:

prepares for performance test execution, executes performance test and analyze it

Вопрос **21**

Нет ответа

Балл: 1,00

Quick sort, like merge sort, applies the

- a. Always a least-weight edge
- b. divide-and-conquer paradigm
- c. minimum of any edge satisfying the property
- d. gives us an upper bound on the running time for any input

Правильный ответ:
divide-and-conquer paradigm

Вопрос **22**

Нет ответа

Балл: 1,00

On that device the static memory is located.

- a. CPU
- b. Processor
- c. RAM
- d. GPU
- e. Hard Drive

Правильный ответ: RAM

Вопрос **23**

Нет ответа

Балл: 1,00

Which are part of the steps at each level of recursion?

- a. conquer
- b. combine
- c. all of the above
- d. divide

Правильный ответ:
all of the above

Вопрос **24**

Нет ответа

Балл: 1,00

An algorithm is a well-defined sequence of steps used to solve a well-defined problem in finite time

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **25**

Нет ответа

Балл: 1,00

Which of the following do we call the types of algorithms?

- a. Dynamic Programming
- b. Sorting algorithms
- c. Binary algorithms
- d. Tree algorithms
- e. Search algorithms
- f. Divide and Conquer
- g. Brute Force Solution
- h. Greedy algorithms

Правильные ответы: Dynamic Programming, Brute Force Solution, Divide and Conquer, Greedy algorithms

Вопрос **26**

Нет ответа

Балл: 1,00

What of the following is true for queue?

- a. We can access any elements anytime with complexity O(1)
- b. We can insert elements only from 1 end
- c. We can easily erase elements from the beginning
- d. We can insert elements from both ends

Правильные ответы: We can insert elements only from 1 end, We can easily erase elements from the beginning

Вопрос **27**

Нет ответа

Балл: 1,00

Non-functional testing Parameters, match the following

efficiency	Выберите...
interoperability	Выберите...
portability	Выберите...
flexibility	Выберите...

Правильный ответ:
efficiency → The extent to which any software system can handles capacity, quantity and response time,

interoperability → This non-functional parameter checks a software system interfaces with other software systems,
portability → The flexibility of software to transfer from its current hardware or software environment,

flexibility → The term refers to the ease with which the application can work in different hardware and software configurations

Вопрос **28**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Supports performance test execution as configuration or application issues are found

- a. Monitoring Support
- b. Application Support
- c. Performance Engineering Lead
- d. Project Manager

Правильный ответ:
Application Support

Вопрос **29**

Нет ответа

Балл: 1,00

Binary search is a very efficient algorithm for searching in a 1._____ array. It is a principal example of a 2._____ algorithm. Same with identifying a fake coin with a balance scale and Russian peasant multiplication.

- a. A Directed Acyclic Graph ie a graph with no cycles
- b. 1. sorted

  2. decrease-by-a-constant-factor
- c. Euclid's algorithm, interpolation search, Nim... etc
- d. 1. Warshall's
  2. Floyd's

Правильный ответ:
1. sorted

2. decrease-by-a-constant-factor

Вопрос **30**

Нет ответа

Балл: 1,00

Which of the following statement(s) is TRUE?

- a. A hash function takes a message of arbitrary length and generates a fixed length code.
- b. A hash function may give the same hash value for distinct messages.
- c. A hash function takes a message of fixed length and generates a code of variable length.

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

◄ preparation for final

Перейти на...

week 1 tasks ►

Тест начат	Среда, 25 Май 2022, 00:26
Состояние	Завершено
Завершен	Среда, 25 Май 2022, 00:26
Прошло времени	13 сек.
Баллы	0,00/30,00
Оценка	**0,00** из 100,00

Вопрос **1**

Нет ответа

Балл: 1,00

Which one describes the limiting behavior of a function when the argument tends towards a particular value or infinity?

- a. Greedy algorithm
- b. Big Oh notation
- c. Dynamic Programming
- d. Divide and conquer

Правильный ответ:
Big Oh notation

Вопрос **2**

Нет ответа

Балл: 1,00

Performance Engineering is the process

- a. by which software is analyzed and will work faster
- b. by which software should be runned
- c. by which software is tested and tuned with the intent of realizing the required performance

Правильный ответ:
by which software is tested and tuned with the intent of realizing the required performance

Вопрос **3**

Нет ответа

Балл: 1,00

What is the goal of spike testing?

a. validate that the system is able to handle a given load

b. check robustness of a system in case of extreme load

c. test the system resistance in the event of a sudden spike of concurrent users

d. determine how the system works under particular load

Правильный ответ:

test the system resistance in the event of a sudden spike of concurrent users

Вопрос **4**

Нет ответа

Балл: 1,00

Which algorithm allows us to find the minimum point in array that first decreases and the grows?

- a. Thernary Search
- b. Sieve of Erathosphenes
- c. Merge Sort
- d. Binary Search

Правильный ответ: Thernary Search

Вопрос **5**

Нет ответа

Балл: 1,00

Algorithm based on simplifying a complicated problem by breaking it down into simpler sub-problems. In this type of algorithms we save values for lower size solutions.

- a. Search algorithms
- b. Brute Force Solution
- c. Sorting algorithms
- d. Dynamic Programming
- e. Divide and Conquer

Правильный ответ: Dynamic Programming

Вопрос **6**

Нет ответа

Балл: 1,00

What of the following is true for stack?

- a. We can access any elements anytime with complexity O(1)
- b. We can insert elements from both ends
- c. We can easily erase elements from the beginning
- d. We can insert elements only from 1 end
- e. We can insert elements at the mid

Правильный ответ: We can insert elements only from 1 end

Вопрос **7**

Нет ответа

Балл: 1,00

Which is NOT an example of Non-functional requirements?

a. CPU Utilization

b. The number of users handled by the application

c. Page response time

d. Request Utilization

Правильный ответ:

Request Utilization

Вопрос **8**

Нет ответа

Балл: 1,00

On that device the dynamic memory is located.

- a. Hard Drive
- b. GPU
- c. Processor
- d. CPU
- e. RAM

Правильный ответ: RAM

Вопрос **9**

Нет ответа

Балл: 1,00

What is the complexity of quick sort algorithm in worst case? Write without spaces, array size N.

Ответ:

Правильный ответ: O(N N)

Вопрос **10**

Нет ответа

Балл: 1,00

Improve and enhance knowledge of the product behavior and technologies in use

- a. performance analysis
- b. non functional testing
- c. analysing data

Правильный ответ:
non functional testing

Вопрос **11**

Нет ответа

Балл: 1,00

A Boolean variable can take on only 1 value.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Неверно

Вопрос **12**

Нет ответа

Балл: 1,00

Which one is the definition of Performance Engineer?

- a. programming code specific to performance testing to automate the real-world user behavior
- b. set to tests and strategies which are applied to any software, program, application, or API, to correct any flaws
- c. type of testing of Software to check non-functional aspects
- d. prepares for performance test execution, executes performance test and analyze it

Правильный ответ:

prepares for performance test execution, executes performance test and analyze it

Вопрос **13**

Нет ответа

Балл: 1,00

In dynamic programming, the technique of storing the previously calculated values is called _____

- a. memoization
- b. storing value property
- c. saving value property
- d. mapping

Правильный ответ:
memoization

Вопрос **14**

Нет ответа

Балл: 1,00

Performance Testing - is a software testing process used for testing the speed, response time, stability, reliability, scalability and resource usage of a software application under particular workload.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **15**

Нет ответа

Балл: 1,00

Performance Engineering aims are to optimize the most important application performance trait i.e. user experience.

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **16**

Нет ответа

Балл: 1,00

What is the goal of soak testing?

a. determine how the system works under particular load

b. check robustness of a system in case of extreme load

c. test the system resistance in the event of a sudden spike of concurrent users

d. validate that the system is able to handle a given load

Правильный ответ:

determine how the system works under particular load

Вопрос **17**

Нет ответа

Балл: 1,00

What is Linear Programming?

a. The problem is one that asks to list vertices of a digraph in an order such that for every edge of the digraph, the vertex it starts at is listed before the vertex it points to.

b. - Dynamic programming is a technique for solving problems with overlapping sub-problems

- Typically, these sub-problems arise from a recurrence relating a solution to a given problem with solutions to its smaller sub-problems of the same type

- Dynamic programming suggests solving each smaller sub-problem once and recording the results in a table from which a solution to the original problem can be then obtained

c. Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

d. Instance simplification is transforming an instance of a problem to an instance of the same problem with some special property that makes the problem easier to solve.

Правильный ответ:
Linear programming concerns optimizing a linear function of several variables subject to constraints in the form of linear equations and linear inequalities.

Вопрос **18**

Нет ответа

Балл: 1,00

The change making problem can be solved by dynamic programming

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **19**

Нет ответа

Балл: 1,00

Match the following

Load testing	Выберите...
Stress testing	Выберите...
Spike testing	Выберите...
Endurance testing	Выберите...

Правильный ответ:

Load testing → checks the application's ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live,

Stress testing → involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application,

Spike testing → tests the software's reaction to sudden large spikes in the load generated by users,

Endurance testing → is done to make sure the software can handle the expected load over a long period of time

Вопрос **20**

Нет ответа

Балл: 1,00

One of the simplest collision resolution technique is called

- a. discovered
- b. True
- c. collision
- d. chaining

Правильный ответ:
chaining

Вопрос **21**

Нет ответа

Балл: 1,00

What is the complexity of merge sort algorithm? Write without spaces, array size N.

Ответ:

Правильный ответ: O(NlogN)

Вопрос **22**

Нет ответа

Балл: 1,00

Match the following

shows the bits per second used by a network interface	Выберите...
amount of physical memory available to processes on a computer	Выберите...
number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage	Выберите...
amount of time disk is busy executing a read or write request	Выберите...
an amount of time processor spends executing non-idle threads	Выберите...
amount of virtual memory used	Выберите...

Правильный ответ:

shows the bits per second used by a network interface → Bandwidth,

amount of physical memory available to processes on a computer → Memory use,

number of bytes a process has allocated that can't be shared amongst other processes. These are used to measure memory leaks and usage → Private bytes,

amount of time disk is busy executing a read or write request → Disk time,

an amount of time processor spends executing non-idle threads → Processor Usage,

amount of virtual memory used → Committed memory

Вопрос **23**

Нет ответа

Балл: 1,00

The problem of weighted interval scheduling can be solved in O(n log n) time using dynamic programming

Выберите один ответ:

- Верно
- Неверно

Правильный ответ: Верно

Вопрос **24**

Нет ответа

Балл: 1,00

The following paradigm can be used to find the solution of the problem in minimum time: Given a set of non-negative integer, and a value K, determine if there is a subset of the given set with sum equal to K:

- a. f2 ,f4, f3, f1
- b. Incremental approach
- c. False
- d. Dynamic programming

Правильный ответ:
Dynamic programming

Вопрос **25**

Нет ответа

Балл: 1,00

If a problem can be solved by combining optimal solutions to non-overlapping problems, the strategy is called _____

- a. recursion
- b. divide and conquer
- c. greedy
- d. iteration
- e. dynamic programming

Правильный ответ:
divide and conquer

Вопрос **26**

Нет ответа

Балл: 1,00

The ____ notation defines an upper bound of an algorithm, it bounds a function only from above.

- a. big omega
- b. big O
- c. small omega
- d. big theta

Правильный ответ:
big O

Вопрос **27**

Нет ответа

Балл: 1,00

Which of the following statement(s) is TRUE?

- a. A hash function takes a message of arbitrary length and generates a fixed length code.
- b. A hash function may give the same hash value for distinct messages.
- c. A hash function takes a message of fixed length and generates a code of variable length.

Правильный ответ:
A hash function takes a message of arbitrary length and generates a fixed length code.

Вопрос **28**

Нет ответа

Балл: 1,00

Choose which functional role best describes responsibility: Supports and maintains the Performance Test environment

a. Project Manager

b. Monitoring Support

c. Performance Test Environment Support

d. Application Support

Правильный ответ:

Performance Test Environment Support

Вопрос **29**

Нет ответа

Балл: 1,00

Which of the following sorting algorithms for a typical implementation gives the best performance when applied on an array which is sorted or almost sorted?

- a. Merge sort
- b. Merge
- c. Insertion sort
- d. Priority queue

Правильный ответ:
Insertion sort

Вопрос **30**

Нет ответа

Балл: 1,00

What is the goal of load tests?

a. test the system resistance in the event of a sudden spike of concurrent users

b. validate that the system is able to handle a given load

c. determine how the system works under particular load

d. check robustness of a system in case of extreme load

Правильный ответ:

validate that the system is able to handle a given load

◄ preparation for final

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