

Question 1

Not yet
answered

Marked out of
1.00

In UNIX, which system call is used to create a new process?

Select one:

- ☐ a. **wait()**
- ☐ b. **exec()**
- ☐ c. **create()**
- ☒ d. **fork()**

Question 2

Not yet
answered

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1.00

What is printed by this Java stream code?

```
Stream.of("dog", "deer", "dove")  
    .filter(s -> s.startsWith("d"))  
    .map(s -> s.length())  
    .reduce((a, b) -> a + b)  
    .ifPresent(System.out::println);
```

Select one:

- ☒ a. **9**
- ☐ b. **Compilation error**
- ☐ c. **11**
- ☐ d. **10**

Question 3

Not yet
answered

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1.00

What type of testing focuses on verifying interactions between integrated components or systems?

Select one:

- ☐ a. **Regression Testing**
- ☐ b. **Integration Testing**
- ☒ c. **Unit Testing**
- ☐ d. **Acceptance Testing**

Question 4

Not yet answered

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Which data structure best suits the following scenario?

"Implement a system that supports retrieving the k most frequent elements from a stream of integers."

Select one:

- ☐ a. Trie and ArrayList
- ☒ b. Max-Heap with HashMap
- ☐ c. Stack and Queue
- ☐ d. Deque and TreeMap

Question 5

Not yet answered

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What does a Trie data structure primarily store?

Select one:

- ☐ a. A graph representation for shortest paths
- ☐ b. A list of integers sorted in ascending order
- ☐ c. A balanced binary search tree for numbers
- ☒ d. A set of strings with efficient prefix search

Question 6

Not yet answered

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What is the output of the following recursive function?

```
static int mystery(int n) {  
    if (n == 0) return 0;  
    return n % 10 + mystery(n / 100);  
}
```

Call: `System.out.println(mystery(987654321));`

Select one:

- ☒ a. 25
- ☐ b. 45
- ☐ c. 1
- ☐ d. 9

Question 7

Not yet answered

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Which layer of the OSI model is responsible for end-to-end delivery of data?

Select one:

- ☐ a. Application Layer
- ☐ b. Network Layer
- ☒ c. Data Link Layer
- ☐ d. Transport Layer

Question 8

Not yet answered

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Identify the time complexity of the function:

```
void foo(int n) {  
    for (int i = 1; i <= n; i *= 2) {  
        for (int j = 0; j < n; j++) {  
            System.out.print("*");  
        }  
    }  
}
```

Select one:

- ☐ a. $O(n)$
- ☐ b. $O(n \log n)$
- ☐ c. $O(\log n)$
- ☐ d. $O(n^2)$

Question 9

Not yet answered

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In Agile methodology, what is a sprint?

Select one:

- ☐ a. A security test
- ☐ b. A long-term project milestone
- ☒ c. A fixed-duration development cycle
- ☐ d. A debugging session

Question 10

Not yet answered

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Which of the following is not a black-box testing technique?

Select one:

- ☐ a. **Statement Coverage**
- ☐ b. **Boundary Value Analysis**
- ☐ c. **Decision Table Testing**
- ☐ d. **Equivalence Partitioning**

Question 11

Not yet answered

Marked out of 1.00

Which of the following statements about topological sorting of a Directed Acyclic Graph (DAG) is TRUE?

Select one:

- ☐ a. **Every DAG has at least one topological ordering**
- ☐ b. **Topological sort can be applied on graphs with cycles**
- ☒ c. **Topological sort gives the shortest path between nodes in the graph**
- ☐ d. **The reverse of a topological order is always a valid topological order**

Question 12

Not yet answered

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The primary purpose of the requirement analysis phase is to:

Select one:

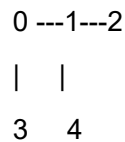
- ☒ a. **Identify what the users need**
- ☐ b. **Write code modules**
- ☐ c. **Design the system architecture**
- ☐ d. **Perform system testing**

Question 13

Not yet answered

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You are given a connected, unweighted graph:



Which traversal order could be produced by DFS starting from node 0?

Select one:

- ☐ a. 0 1 2 4 3
- ☐ b. 0 1 4 2 3
- ☐ c. 0 3 1 4 2
- ☒ d. All of the above

Question 14

Not yet answered

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In software testing, what is regression testing used for?

Select one:

- ☐ a. Testing the UI responsiveness
- ☐ b. Finding syntax errors
- ☒ c. Load testing the system
- ☐ d. Ensuring unchanged features still work after updates

Question 15

Not yet answered

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What does the Time To Live (TTL) field in an IP packet prevent?

Select one:

- ☐ a. Packet loss
- ☐ b. Congestion
- ☐ c. Packet duplication
- ☒ d. Routing loops

Question 16

Not yet answered

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Which of the following uses UDP as the transport protocol?

Select one:

- ☐ a. HTTP
- ☐ b. DNS
- ☐ c. FTP
- ☒ d. SMTP

Question 17

Not yet answered

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You're given a Directed Acyclic Graph (DAG) with the following edges:

$5 \rightarrow 0$

$5 \rightarrow 2$

$4 \rightarrow 0$

$4 \rightarrow 1$

$2 \rightarrow 3$

$3 \rightarrow 1$

Which of the following is a valid topological sort for this DAG?

Select one:

- ☐ a. 0 5 2 3 4 1
- ☐ b. 5 4 1 0 2 3
- ☒ c. 5 2 3 4 1 0
- ☐ d. 5 4 2 1 3 0

Question 18

Not yet answered

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Consider this method for solving N-Queens:

```
boolean isSafe(int board[][], int row, int col) {  
    for (int i = 0; i < col; i++)  
        if (board[row][i] == 1) return false;  
  
    for (int i=row, j=col; i>=0 && j>=0; i--, j--)  
        if (board[i][j] == 1) return false;  
  
    for (int i=row, j=col; i<N && j>=0; i++, j--)  
        if (board[i][j] == 1) return false;  
  
    return true;  
}
```

Which directions are checked?

Select one:

- ☐ a. Row, column, both diagonals
- ☒ b. Upper-right diagonal only
- ☐ c. Right row, all diagonals
- ☐ d. Left row, upper-left diagonal, lower-left diagonal

Question 19

Not yet
answered

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1.00

Given this bit manipulation logic, what is output?

```
int n = 23;  
n = n & (n - 1);  
System.out.println(n);
```

Select one:

- ☐ a. 19
- ☐ b. 21
- ☒ c. 22
- ☐ d. 0

Question 20

Not yet
answered

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1.00

Which of the following best describes thrashing in an operating system?

Select one:

- ☐ a. Deadlock caused by page faults
- ☐ b. Fragmentation in physical memory
- ☒ c. Scheduling processes out of order
- ☐ d. Excessive swapping of processes between RAM and disk

Quiz Navigation

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Finish attempt ... (<http://kmitonline.com/mod/quiz/summary.php?attempt=482135>)

Time left **0:09:12**