GRID 5.0

Q1 → You are developing a sales application and need to display the total amount due by a customer. How would you write formatted output to the console?

Answer:

a) System.print();

b) System.display();

c) System.out.println();

d) System.out.printf(); 👈

Q2 →Which of the following statement is true about the following code?

```
import java.util.*;
public class Main {
public static void main(String[] args) {
int[] numbers = new int[5];
Arrays.fill(numbers, 1);
}
}
```

Answer:

a) Initializes all elements of the array to 1 👈

b) Copies elements from another array to 'numbers'

c) Sorts the elements in 'numbers' in ascending order

d) Prints the sum of all elements in the array

Q3 → Statement 1: The worst-case time complexity of a typical implementation of QuickSort is O(n2). It is when the array is sorted or reverse sorted.

Statement 2: The best case time complexity of a typical implementation of Insertion Sort is O(n). It is when the input array is sorted.

Answer:

a) Both statements are true. 🈯

b) Both statements are false.

c) only statement 1 is true.

d) only statement 2 is true.

Not sure

Q4 →

Arrange the functions below descending by their rates of growth.

Functions

(n+1)!

n!

4^n

4^logn

2^logn

(3/2)^n

3^n + n^2 +20n

n x 3^n

n^2 + 200

20n + 500

4(n^2)
n^(2/3)
1

SOLVE KR LENA ,,, mera time exceed hoo gya tha :(

Q5 →

Consider the insertion sort algorithm implemented for sorting an array of integers in ascending order. Which of the following statements accurately describes the behavior of the algorithm?

Answer:
a) The algorithm has a time complexity of O(n), where 'n' is the number of elements in the array. It performs in-place sorting by repeatedly comparing adjacent elements and swapping them until the array is sorted.
b) The algorithm has a time complexity of O(n^2), where 'n' is the number of elements in the array. It performs in-place sorting by iteratively selecting the smallest element and placing it in the correct position. 有(NOT SURE)
c) The algorithm has a time complexity of O(log n), where 'n' is the number of elements in the array. It performs out-of-place sorting by recursively dividing the array into subarrays and merging them in sorted order.
d) The algorithm has a time complexity of O(n log n), where 'n' is the number of elements in the array. It performs in-place sorting by repeatedly partitioning the array into two subarrays based on a pivot element.

NOT SURE BUT BBBBBBBBBBBBBBBBBB

Q6 →You are given a task that requires finding the optimal solution among a large number of possibilities. To tackle this problem, you decide to use a branch-and-bound algorithm with a specific data structure. The problem space consists of a set of N items, each

associated with a positive value and weight. Additionally, there is a maximum capacity W that can be carried in a container. To optimize the process, you decide to implement the branch-and-bound algorithm using a priority queue. Each node in the priority queue represents a partial solution (a subset of items), and its value is the upper bound of the potential solution it can lead to.
Which data structure should be used to efficiently store the partial solutions in the priority queue?

Answer:

a) Binary Search Tree

b) Min-Max Heap

c) AVL Tree

d) Fibonacci Heap 有(NOT SURE)

Q7 →Alex is given an array arr of length n containing positive integers. He wants to find the maximum sum of a subarray of arr, where a subarray is defined as a contiguous part of the array. Alex wants to solve this problem using Dynamic Programming.

```
#include <iostream>
using namespace std;

int maxSubarraySum(int arr[], int n) {
// TODO: Dynamic Programming implementation goes here
}

int main() {
int arr[] = {1, -2, 3, 4, -5, 6, 7};
int n = sizeof(arr) / sizeof(arr[0]);
int maxSum = maxSubarraySum(arr, n);
cout << "Maximum subarray sum: " << maxSum << endl;
```

```
return 0;
}
```

OPTION NAHI HAI MERE PASS KHUD SE DIMAG LGA LENA 🙂

Q8 →In ChatGPT user input is called as,

Answer:
a) Command
b) Query
c) Prompt 指
d) Response

Q9 →as a rule of thumb, never write in a prompt to ChatGPT information that contains

Answer:
a) Authentication credentials
b) API keys
c) Client Data
d) Information about internal processes or business logic
e) All of the above 指

Q10 →Which of the prompt is used to perform sentiment analysis to determine whether a Twitter post is positive, neutral, or negative

Answer:

a) Zero-shot classification
b) Few-shot classification
c) Batch classification 🈶(Not Sure)
d) Semantic classification

Q11 →A multinational company conducts regular security audits to assess the effectiveness of its information security controls. During one such audit, it is discovered that a certain department has been using unauthorized software applications to process sensitive customer data.
Which compliance principle is primarily violated in this scenario?

Answer:
a) Confidentiality
b) Non-repudiation
c) Principle of Least Privilege 🈶(NOT SURE)
d) Change Management

Q12 →A company's network administrator wants to implement a firewall configuration that allows employees to access web-based email services but blocks all other web traffic.
If the services use HTTP/HTTPS protocol, which of the following firewall rules should be implemented to achieve this objective?

Answer:
Allow outgoing traffic on ports 80 and 443 🈯

Allow incoming traffic on ports 80 and 443
Block outgoing traffic on ports 80 and 443
Block incoming traffic on ports 80 and 443

Q13 →How would you classify situations where an individual uses their legitimate IP address on Facebook Messenger for a phishing campaign, resulting in the IP address being flagged as malicious due to its bad reputation, even though the host is not actually engaging in malicious activities?

Answer:
a) Cloud-enabled Kill Chain
b) Indicator of Compromise (IOCs) 🈯
c) Cyber campaign
d) Binary padding

Q14 →Suppose you need to allow the user to get authenticated once so that many other applications can identify the user's identity through various authentication without requesting the reauthentication. Identify the following option that will enable you to do so?

Answer:
a) OpenID
b) Single Sign On System 🈯
c) Security Assertion Markup Language
d) Virtual Private Database

Q15 → You want to integrate a network device to Splunk, and for that, the network device needs to be configured to send logs to a particular port. We cannot just send logs to Splunk IP and any random port. Which port can be used for network devices?

Answer:

a) 7575

b) 8000

c) 53

d) 514 👈

Q16 →Suppose an Attacker is utilizing multiple compromised computer systems as sources of attack traffic to disrupt the normal traffic of a targeted server and misuse TCP to overload the server and deny access to the user.
Which of the following attack is the Attacker trying to do?

Answer:

a) DOS Attack

b) SYN Flood 👈

c) Ping of Death Attack

d) UDP Manipulation

Q17 →In a company, a malicious insider intentionally steals confidential customer data to sell it to a competitor. Which of the following controls could have mitigated this risk?

Answer:
a) Firewall implementation

b) Access control mechanisms 🈯

c) Regular data backups

d) Intrusion prevention systems

Q18 → Traffic moving between the DMZ and other interfaces on the protected side of the firewall still goes through the firewall and can have firewall protection policies applied. Which of the following advantage of setting up a DMZ with Two firewalls?

Answer:
a) You can do Load Balancing.
b) Improved network performance 🈚(Not sure)
c) Stateful packet filtering.
d) Controls where traffic goes

Q19 →If you are browsing and trying to open some website, but it contains Objectionable Material or maybe the website you are trying to open is vulnerable. It saves the user credential like passwords and transactions.
If your ISP blocks Objectionable material, what device would you guess has been implemented?

Answer:
a) NIDS
b) Internet content filter 🈯
c) Firewall
d) Proxy server.

Q20 →John wants to connect his personal laptop to a public Wi-Fi network at a coffee shop. Which of the following precautions should he take to ensure network security?

Answer:
a) Disable the firewall on the laptop.

b) Downloading and installing random software or apps from unknown sources

c) Use a virtual private network (VPN) connection. 🈯

d) Using the same password for the coffee shop's Wi-Fi as he does for his online banking

Q21 →

```
#include <iostream>

int calculate(int n)
{
if (n == 0)
return 0;
else
return n + calculate(n - 1);
}

int main()
```

```
{
int result = calculate(5);
std::cout << result << std::endl;
return 0;
}
```

ans 15

Q22 →

```
#include <iostream>

int num(int n)
{
    if (n == 0 || n == 1)
        return 1;
    else
        return n * num(n - 1);
}

int main()
{
    int n = 4;
    int result = num(n);
    std::cout << result << std::endl;
    return 0;
}
```

ans 24

Q23 →

```
import java.util.*;

public class Main {
public static void main(String[] args) {
int[] arr = {1, 2, 3, 4, 5};
System.out.println(Arrays.toString(arr));

}
}
```

ans [1, 2, 3, 4, 5]

Q24 →KUCH THA YDD NAHI java me

```
import java.util.*;

public class Main {
public static void main(String[] args) {
int[] numbers = new int[5];
Arrays.fill(numbers, 1);

}
}
```