Entrance Test for Recruit Drive 01 Oct 2022 for AthenianTech Pvt Limited

4 - 5 PM

1. Please fill up your Name, Roll Number, Email Id, Mobile Number , Course

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2. In which of the following situations would scripting be more appropriate than writing a compiled program?

(1 Point)

- ◉ You need to carry out a computation that requires high performance and must be as quick as possible.

- ○ You need to carry out an administrative task repeatedly, and the task does not require maximum efficiency.

- ○ Your task requires the use of several specialized libraries (modules) that have interfaces designed for programs written in C (Java).

- ○ Your computational task requires use of a low-level resource.

3. The following script is called "hello.py":

#! /bin/py

cat '$1' "$2" $3

What command does

python hello.py A "B C" D E execute?

(1 Point)

○ cat A B C D E

◉ cat $1 B C D

○ cat $1 A B C

○ cat A B C D

4. An example of _____ would be when a word processor, a database, and a browser are running on a computer in different address spaces.

(1 Point)

◉ Domain separation

○ Resource encapsulation

○ Process isolation

○ Abstraction

5. _____ is an object-oriented concept in which all data and functions required to use the resource are packaged into a single self-contained component. **(1 Point)**

○ Modularity

○ Layering

○ Resource encapsulation

○ None of the above

6. Only allowing the necessary number of rights to accomplish the task is an example of:(1 Point)

○ Domain separation

○ Least privilege

⦿ Information hiding

○ Minimization

7. Separating the functionality of a program into independent, interchangeable modules is an example of which cybersecurity first principle?(1 Point)

○ Resource encapsulation

⦿ Modularization

○ Minimization

○ Abstraction

8. Which cybersecurity first principle only provides the essential details of what is being modeled and provides the minimum information necessary to accomplish the task?(1 Point)

○ Layering

⦿ Least privilege

○ Process isolation

○ Abstraction

9. Security should be considered at which phase(s) of the software development lifecycle?(1 Point)

○ Analysis and Design

○ Implementation

⦿ Testing and Maintenance

○ All of the above

10. Which is **not** a true statement?
    (1 Point)

○ Poor design and insufficient testing leads to insecure software

○ It is important to consider security at all phases of a software project

⦿ It is best to add security after the coding is complete

○ Most security issues result from attacks exploiting insecure software

11.
    Which of the following are the three basic control structures? Choose all that apply.(1 Point)

☑ Sequence

☑ Selection

☐ Control

☑ Repetition

12. Which of the following is a source of input for programs?(1 Point)

○ Keyboard

○ Network

○ File

◉ All of the Above

13. Which of the following should be checked for reasonableness? Choose all that apply.(1 Point)

☐ Age

☐ First Name

☑ City

☐ Item Price

14. Which of the following inputs would require a specific template or format to be appropriate? Choose all that apply.(1 Point)

☑ Social security number

☐ National debt

☐ Telephone Number

☑ Birthdate

15. Which type of input validation applies to a phone number? Choose all that apply. (1 Point)

☑ Length

☐ Range or reasonableness

☑ Format

☑ Type

16. Given the following code, what type of validation error could occur?

Avg=total/count;

System.out.println ("The Average is: " + avg);(1 Point)

○ Length check

○ Range check

○ Reasonable check

◉ Divide by zero

○ Format check

17. Which of these stateementsem(1 Point)

○ Most programmers follow style guidelines.

◉ Most programmers write new code.

○ Most programmers use meaningful variable names

○ Most programmers use constants for data that will not change during program execution.

18. It is in a society's interest to provide its people with a sense of security because
(1 Point)

○ Security is widely recognized to be a highly esteemed core value

○ When a society's members are secure, they are more productive for society

○ It is the responsibility of a society to keep its members safe

◉ All of these

19. Two common opinions about the relationship between privacy and security are:
(1 Point)

☑ It is impossible for privacy and security to coexist

☐ Privacy protection is necessary in order for security to exist

☐ Security protection is necessary in order for privacy to exist

☐ Privacy and security are the same thing

20. Email is a prime target of criminal hackers because(1 Point)

○ Email use is widely distributed across the broad population

○ Many organizations' email policies are lax about their employees' compliance

○ Email users are poorly informed about the hazards of common criminal schemes such as phishing

◉ All of these

21. A Simulated campaign for demonstrating email hacking incident makes it clear that(1 Point)

○ If technical safeguards are put in place, security is guaranteed

○ The combination of weak technical security mechanisms, poor security processes, and poor human judgment attracts criminals

○ If users are well-informed, no security breaches will happen

◉ All of these

22. What weapons do the hackers use to carry out the DDoS attack?(1 Point)

○ Websites such as Netflix, Reddit, etc

◉ IoT devices and viruses

○ Email hacking

○ Broken links

23. What makes IoT devices easy targets for criminal hackers?(1 Point)

    ○ Weak password protection of the devices

    ○ Easy online access

    ● IoT device manufacturers' lack of attention to securing the devices

    ○ All of these

24. "The actions by a nation-state or international organization to attack and attempt to damage another nation's computers..." is a description of which of the following?(1 Point)

    ○ Cyber crime

    ● Cyber warfare

    ○ Cyber terrorists

    ○ Hacktivists

25. Which of the following is not a security challenge?(1 Point)

    ● Systems are more standardized than in the past

    ○ Vulnerabilities are discovered and exploited before fixes can be disseminated

    ○ Systems are more interconnected than before

    ○ Smaller devices don't support encryption

26. The potential to cause damage to a system is considered a/an(1 Point)

    ○ Risk

    ● Vulnerability

○ Threat

○ Attack

27. A less skilled attacker who uses canned programs to attack a system is called a/an
(1 Point)

○ Cyber Criminal

◉ Script Kiddie

○ Cyber Criminal

○ Insider

28. An attack from multiple sources with the intent to disrupt or disable availability is
known as a/an(1 Point)

○ DoS

◉ DDoS

○ DNS Poisoning

○ Smurf

29. An attack in which a user downloads what appears to be a useful file, but that
actually contains malware that loads in the background and gives the attacker full
access to the user's system, is known as a/an(1 Point)

◉ Virus

○ Worm

○ Ransomware

○ Remote access Trojan

30. A form of social engineering in which a spoofed email is sent out to targets of high financial interest (e.g., CEOs, CIOs, etc.) is called (1 Point)

○ Phishing

○ Spearfishing

○ Extortionware

○ Whaling

31. A patient is in the hospital for a surgical procedure. To ensure that an unauthorized user doesn't hack into the hospitals records and modify records, the hospital employs cryptographic processes to "hash" the files, creating a digital fingerprint of that file. This process provides a security service known as(1 Point)

○ Confidentiality

○ Integrity

○ Availability

○ Authentication

32. A security component that could be deployed to provide for confidentiality would be (select the best answer)(1 Point)

○ Audit logs

○ File integrity checkers

○ Intrusion Detection System

○ Encryption

33. Data backups are examples of _____ controls

(1 Point)

○ Preventive

○ Deterrent

○ Detective

● Corrective

34. You store personal documents and spreadsheets with a cloud provider. You would like your data to be available only to people having a special unlock key. What should you apply to your documents and spreadsheets? (1 Point)

○ File Hashing

● File Encryption

○ File Permissions

○ File Backup

35. In which of the following attack scenarios does the attacker have the most power? (1 Point)

● Ciphertext only attacks

○ Known plaintext attacks

○ Chosen plaintext attacks

○ Chosen ciphertext attacks

36. Which of the following are symmetric key ciphers? Select all that apply.(1 Point)

☐ DES

☑ RSA

☐ Diffie-Hellman

☐ AES

37. Assume Alice and Bob both have public and private keys in a public key setting. If Alice wants to send Bob a secret message, Alice encrypts her message using _____ key and Bob decrypts it using _____ key.(1 Point)

○ Alice's public, Bob's private

◉ Bob's public, Bob's private

○ Alice's private, Bob's public

○ Alice's private, Bob's private

38. Assume Alice and Bob both have public and private keys in a public key setting. If Alice and Bob want to agree on a secret value, then Alice uses her _____ key and Bob's _____ key to compute the secret value.(1 Point)

○ public, public

○ public, private

◉ private, public

○ private, private

39. Hash functions can be used for which of the following (more than one may apply): (1 Point)

☐ Checking whether a file was corrupted during download

☑ Storing passwords

☑ Hiding the content of messages so that they can be recovered only when needed

☑ d. Digital signatures

40. To sign a message for Bob, Alice encrypts the hash of her message using _____. (1 Point)

◯   her public key

◯   Bob's public key

◉   her private key

◯   Bob's private key

41. Which SQL statement is used to extract data from a database?(1 Point)

◯ GET

◯ EXTRACT

◉ SELECT

◯ OPEN

42. With SQL, how do you select a column named "FirstName" from a table named "Persons"?

(1 Point)

◯   EXTRACT FirstName FROM Persons

◯   SELECT Persons.FirstName

◉   SELECT FIRSTNAME FROM Persons

43. In C Lang, which format specifier is often used to print integers?(1 Point)

◉ %d

◯ %s

◯ %f

◯ %c

44. Which operator can be used to find the memory size (in bytes) of a data type or variable?

The sizeof property (1 Point)

◉ The sizeof property

◯ The length property

◯ The sizer property

◯ The len proprty

45. What is the correct JavaScript syntax to change the content of the HTML element below?

<p id="demo">This is a demonstration.</p>What is the correct JavaScript syntax to change the content of the HTML element below?

<p id="demo">This is a demonstration.</p>
(1 Point)

◉ document.getElementById("demo").innerHTML = "Hello World!";

◯ #demo.innerHTML = "Hello World!";

◯ document.getElement("p").innerHTML = "Hello World!";

◯ document.getElementByName("p").innerHTML = "Hello World!";