

**DO NOT WRITE ON TEST**



**INFORMATION  
TECHNOLOGY CONCEPTS**

**~OPEN EVENT~**

**(391)**

**REGIONAL 2022**

**TOTAL POINTS \_\_\_\_\_ 100 Points**

**Test Time: 60 minutes**

## MULTIPLE CHOICE

Identify the choice that *best* completes the statement or answers the question.

1. An algorithm is \_\_\_\_\_.
  - a. a solution that cannot be reached through a set of step-by-step instructions.
  - b. the results of the problem.
  - c. the set of step-by-step instructions to solve the problem.
  - d. the knowledge base of a solution.
  
2. Typical problem that can be solved with heuristic solution include \_\_\_\_\_.
  - a. balancing your checkbook.
  - b. choosing stock on the stock market.
  - c. a calculus problem.
  - d. baking a cake.
  
3. In hexadecimal notation, which bit pattern cannot be expressed?
  - a. 11111111
  - b. 1001
  - c. 110011
  - d. 100000000001
  
4. With the fewest number of input patterns, which of the following Boolean operations produces the output 1?
  - a. AND
  - b. OR
  - c. XOR
  - d. XXR
  
5. A new security awareness program is being implemented at your company. As an end-user educator, you are responsible for educating customers on social engineering and a variety of other threats. Which of the following best defines social engineering?
  - a. illegal copying of software
  - b. gathering information from discarded manuals and printouts
  - c. using people skills to obtain proprietary information
  - d. destruction or alteration of data
  
6. What type of hacking occurs when an attacker monitors an authenticated session between the client and the server and takes over the session?
  - a. denial of service
  - b. web attack
  - c. session hijacking
  - d. none of the above

7. FERPA protects which of the following?
  - a. medical records
  - b. educational records
  - c. personally identifiable information
  - d. financial records
  
8. Which of the following is *not* one of the tasks of the policy development phase?
  - a. approve
  - b. write
  - c. communicate
  - d. authorize
  
9. The Linux operating system is controlled by a software component called the \_\_\_\_\_.
  - a. shell
  - b. kernel
  - c. module
  - d. library
  
10. Which of the following Linux components refers to a well-defined structure that stores files and directories?
  - a. Server software
  - b. File system
  - c. Kernel module
  - d. Shell
  
11. A computer system is composed of four main structural elements which include \_\_\_\_\_.
  - a. processor, main memory, I/O modules and system bus
  - b. processor, I/O modules, system bus and secondary memory
  - c. processor, registers, main memory and system bus
  - d. processor, registers, I/O modules and main memory
  
12. \_\_\_\_\_ is the unit of data exchanged between main memory and cache.
  - a. Block size
  - b. Map size
  - c. Cache size
  - d. Slot size
  
13. Where on the CPU is information most readily accessible for manipulation?
  - a. cache memory
  - b. main memory
  - c. mass storage
  - d. general-purpose registers

14. The maximum rate at which data can be transferred is referred to as \_\_\_\_\_.
- signal
  - bandwidth
  - speed
  - multimedia
15. Backups can be used to protect which of the following?
- confidentiality
  - integrity
  - availability
  - auditing
16. Assigning users only the minimum amount of privileges they need to perform their job is known as which of the following?
- principle of least privilege
  - separation of duties
  - defense in depth
  - security triad
17. The solution to a problem is \_\_\_\_\_.
- the set of step-by-step instructions to solve the problem.
  - the program.
  - the results.
  - all are correct.
18. A set of step-by-step instructions is processed \_\_\_\_\_.
- in the order they are presented and processed.
  - can skip around to other instructions.
  - can return to a previously processed instruction.
  - in random order.
19. The data type of a parameter may be \_\_\_\_\_.
- a constant.
  - a variable.
  - an expression.
  - all of the above.
20. If the operands are both numerical, and the operator is relational, the data type of the resultant is \_\_\_\_\_.
- numerical.
  - relational.
  - logical.
  - none are correct.

21. The data type for Zip Codes \_\_\_\_\_.
  - a. must always be numeric data.
  - b. must always be string data.
  - c. can be either numeric or string data.
  - d. none of the above.
  
22. Physical movement is not required by which mass storage medium?
  - a. magnetic tape
  - b. magnetic disk
  - c. CDs/DVDs
  - d. flash drives
  
23. Which of the following is not a typical operating system role?
  - a. control the allocation of the machine's resources
  - b. control access to the machine
  - c. maintain records regarding files stored in mass storage
  - d. assist the computer user in the task of processing digital photographs
  
24. Which of the following is not a task performed by the kernel of an operating system?
  - a. communicate with the user
  - b. schedule processes
  - c. allocate resources
  - d. avoid deadlock
  
25. Which of these is the process to determine if the credentials given by a user or another system are authorized to access the network resource in question?
  - a. confidentiality
  - b. integrity
  - c. availability
  - d. authentication
  
26. What was the first computer incident-response team?
  - a. Computer Emergency Response Team
  - b. F-Secure
  - c. SANS Institute
  - d. Microsoft Security Advisor
  
27. Someone who legally breaks into a system to assess security flaws is a \_\_\_\_\_.
  - a. script kiddy
  - b. penetration tester
  - c. white hat hacker
  - d. black hat hacker
  
28. The act of gaining access to a system and causing harm is referred to as \_\_\_\_\_.
  - a. white hat hacker
  - b. black hat hacker
  - c. grey hat hacker
  - d. red hat hacker

29. What is the correct order of the policy life cycle?
- review, develop, adopt, publish
  - develop, publish, adopt, review
  - publish, develop, review, adopt
  - review, adopt, develop, publish
30. Which of the following is not a part of the policy development phase?
- approve
  - write
  - communicate
  - authorize
31. Which of the following refers to a specific implementation of a Linux operating system?
- distribution
  - shell
  - module
  - kernel
32. Which of the following refers to a software program that allows a user to issue commands to the system?
- kernel
  - shell
  - distro
  - library
33. Which of the following is *not* a Red Hat-based distro?
- fedora
  - rehl
  - ubuntu
  - centOS
34. Which of the following is rarely installed on Linux server systems because it requires additional hard drive space, CPU cycles, and RAM usage, and also could pose a security risk?
- GUI software
  - kernel modules
  - shells
  - libraries
35. The use of multiple overlapping layers of security to protect data and resources is known as which of the following?
- principle of least privilege
  - separation of duties
  - defense in depth
  - security triad

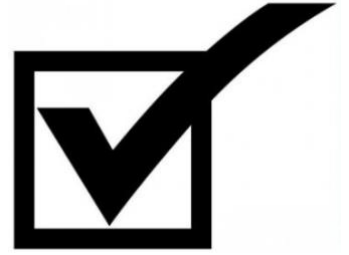
36. In which of the following, is the minimal amount of privileges given to users known as?
- principle of least privilege
  - separation of duties
  - defense in depth
  - security triad
37. To determine the appropriate countermeasures, which of the following puts an economic value on assets?
- risk mitigation
  - risk assessment
  - vulnerability assessment
  - risk avoidance
38. \_\_\_\_\_ is an example of prevention control.
- Intrusion detection system
  - Firewall
  - Motion sensors
  - Security alarm
39. Which of the following can be protected by backups?
- confidentiality
  - integrity
  - availability
  - auditing
40. The variable \_\_\_\_\_.
- is stored in a named memory location.
  - can be changed while a solution is being executed.
  - is given a specific data type.
  - all are correct.
41. A problem that would require an algorithmic solution is \_\_\_\_\_.
- playing a game of chess.
  - making a cup of cocoa.
  - deciding which stock to buy.
  - all are correct.
42. Which of the following is a means of encoding music?
- ASCII
  - MIDI
  - JPEG
  - GIF
43. In the expression  $4 + 10$ , the operand(s) \_\_\_\_\_.
- are the 4 and the 10.
  - is the +.
  - is 14.
  - none are correct.

44. To select the best solution, you should \_\_\_\_\_.
- identify and list the pros and cons of each alternative solution.
  - develop an algorithm for each solution.
  - develop the knowledge base for each solution.
  - identify the problem.
45. An ideal variable name for a client name is \_\_\_\_\_.
- C
  - Cli
  - client\_name
  - CN
46. One of the latest techniques for user authentication involves something that is related to who the user is. This technique is called \_\_\_\_\_.
- smartphone detection
  - ATM card
  - biometric sensing
  - password reset
47. A good password must contain the following except \_\_\_\_\_.
- capital letters
  - special characters
  - numbers
  - name, birthdate, nickname
48. Some of the common techniques listed below help protect the computer resources from being used by unauthorized personnel. Choose the one that is incorrect.
- each user has an unique login account
  - an administrator account monitors and alters settings of regular users
  - the user login password is taped to the monitor/screen so he/she does not forget the password
  - only authorized software downloads are permitted on regular user accounts
49. To increase the security of the passwords, many online accounts now use \_\_\_\_\_.
- two-factor authentication
  - password check over a phone call
  - account details via email
  - change phone number on the account
50. When a \_\_\_\_\_ is used, an external network sees a single IP address, not the internal networks.
- Firewall
  - Proxy server
  - Intrusion detection system
  - Network Monitor





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PROFESSIONALS**  
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Giving Purpose to Potential



# **INFORMATION TECHNOLOGY CONCEPTS**

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**(391)**

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**TOTAL POINTS**

\_\_\_\_\_ **100 Points**

**Test Time: 60 minutes**

**MULTIPLE CHOICE ANSWER KEY:**

- |       |       |
|-------|-------|
| 1. C  | 26. A |
| 2. B  | 27. C |
| 3. C  | 28. B |
| 4. A  | 29. B |
| 5. C  | 30. C |
| 6. C  | 31. A |
| 7. B  | 32. B |
| 8. C  | 33. C |
| 9. B  | 34. A |
| 10. B | 35. C |
| 11. A | 36. A |
| 12. A | 37. B |
| 13. D | 38. B |
| 14. B | 39. C |
| 15. B | 40. D |
| 16. A | 41. B |
| 17. A | 42. B |
| 18. A | 43. B |
| 19. D | 44. A |
| 20. B | 45. C |
| 21. B | 46. C |
| 22. D | 47. D |
| 23. D | 48. C |
| 24. A | 49. A |
| 25. D | 50. B |