

INFORMATION TECHNOLOGY CONCEPTS (391)

– OPEN EVENT –

REGIONAL – 2018

DO NOT WRITE ON TEST BOOKLET

TOTAL POINTS _____ (100 points)

Failure to adhere to any of the following rules will result in disqualification:

- 1. Contestant must hand in this test booklet and all printouts. Failure to do so will result in disqualification.**
- 2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests or facsimile (handwritten, photocopied, or keyed) are allowed in the testing area.**
- 3. Electronic devices will be monitored according to ACT standards.**

No more than sixty (60) minutes testing time

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MULTIPLE CHOICE

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

1. You are looking for a port that will work for an audio device. Which of the following is likeliest to work?
 - a. DVI
 - b. Ethernet
 - c. VGA
 - d. HDMI
2. The top of a top-down hierarchical structure of subdirectories is called the _____.
 - a. Base directory
 - b. Root directory
 - c. Top directory
 - d. Volume directory
3. You do *not* want to store your data locally on your hard disk. You would rather store it using an Internet service. What is this kind of storage known as?
 - a. distributed storage
 - b. cloud storage
 - c. integrated storage
 - d. VoIP
4. A(n) _____ server can find an IP address for a computer when the fully qualified domain name is known.
 - a. DHCP
 - b. DNS
 - c. PPP
 - d. NetBIOS
5. Which of the following is used to keep the motherboard from contacting the case, preventing a short?
 - a. Standoffs
 - b. Headers
 - c. Retention screws
 - d. Case screws
6. An IPv6 address is _____ bits long, and consists of _____ blocks of hexadecimal numbers.
 - a. 128 bits, 8
 - b. 32 bits, 8
 - c. 128 bits, 16
 - d. 32 bits, 16

7. You need a version of USB technology that will support older USB devices, of which you have many, as well as newer ones. What word do you want to see in the specs?
- backward compatible
 - integrated
 - multifunctional
 - Bluetooth-enabled
8. A(n) _____ is the name of a computer and can be used in place of its IP address.
- host name
 - NetBIOS name
 - workgroup name
 - domain name
9. Word processing software, spreadsheet software, database software, and presentation software are examples of what category of computer software?
- System software
 - Application software
 - Hardware coordination software
 - World Wide Web personal use and productivity software
10. A computer that starts up and then shuts off at various stages of the boot, but eventually boots normally, is most likely having an issue with the _____.
- electrical system
 - hard drive
 - video card
 - sound card
11. When using the nslookup command, what kind of query takes an IP address and returns a domain name?
- Forward lookup
 - MX lookup
 - Reverse lookup
 - Address lookup
12. A(n) _____ is the software that compresses a video stream when a video is stored, and decompresses the file when the video is played.
- compression
 - codec
 - bitmap
 - resolution

13. Last night, you experienced a power increase that lasted for less than one thousandth of a second. What is the term for this?
- hit
 - joule
 - spike
 - juice
14. Some motherboards require an extra power connector for PCIe devices. How many pins is this connector?
- 4 or 8 pins
 - 6 or 12 pins
 - 6 or 8 pins
 - 4 or 12 pins
15. Which of the following is *not* a symptom of a virus infection?
- Strange error messages
 - Endless pop-ups in a web browser
 - Hijacked web searches
 - Hard drives making a clicking noise
16. The Internet has its roots in a network that became functional in 1969, linking scientific and academic researchers across the United States. What was the name of that network?
- ARPANET
 - NSFnet
 - LISTSERV
 - MPEG
17. Which of the following allows access to high-speed Internet services through the cable television network?
- cable transceiver
 - cable modem
 - cable receiver
 - cable dialer
18. The most common cause of issues with displays and video equipment is due to _____.
- overheating
 - improperly seated cables
 - lack of adequate power
 - too much power
19. Which of the following is *not* an element of a secure password?
- Eight or more characters in length
 - Mix of upper / lower case characters
 - Use of symbols
 - Consecutive letters or numbers

20. Which of the following print languages was created by Adobe and uses commands sent to the printer to create a bitmap image?
- GDI
 - PCL
 - PostScript
 - XPS
21. Which of the following is a technology that provides high-speed Internet connection using the telephone network?
- DSL
 - ISP
 - CMOS
 - OSP
22. _____ proves that an individual is who they say they are and is accomplished by a variety of techniques, including a username, password, personal identification number (PIN), smart card, or biometric data.
- Authorization
 - Authentication
 - Accounting
 - Mandatory access lists
23. Which of the following is *not* a type of digital video container file?
- MP4
 - AVI
 - VOB
 - PNG
24. What separates the components of a domain name?
- spaces
 - apostrophes
 - commas
 - periods
25. A Mini PCI Express slot uses how many pins on a connector?
- 24 pins
 - 48 pins
 - 52 pins
 - 64 pins
26. Select the video connector that uses separate cables for each RGB signal:
- Composite
 - Component
 - HDMI
 - VGA

27. What is wrong with the following algorithm?

1. Set X to be 1
2. Increment X
3. Print X
4. If $X > 0$, repeat from 2

- a. It does not produce a result.
- b. It is ambiguous.
- c. It does not halt in a finite amount of time.
- d. It is not well-ordered.

28. Which parallel port standard allows transmission in only one direction?

- a. ECP
- b. SPP
- c. ECP
- d. EPP

29. Which of the following is a program that finds websites and webpages?

- a. microbrowser
- b. location utility
- c. web finder
- d. search engine

30. Loopback plugs can test which of the following components?

- a. Power supply
- b. Network ports
- c. Expansion slots
- d. RAM sticks

31. Which of the following occurs when one consumer sells directly to another consumer, such as in an online auction?

- a. consumer-to-consumer (C2C) e-commerce
- b. business-to-consumer (B2C) e-commerce
- c. consumer-to-business (C2B) e-commerce
- d. business-to-business (B2B) e-commerce

32. Select the answer below that *best* describes an inverter.

- a. Changes DC to AC
- b. Changes AC to DC
- c. Doubles the incoming power
- d. Can't be used on a car battery

33. Which of the following terms means that the people who are conversing on a computer are online at the same time?
- a. automatic
 - b. real-world
 - c. real time
 - d. mainline
34. Which file system is used by Blu-Ray discs?
- a. Universal Disk Format
 - b. Compact Disc File System
 - c. FAT32
 - d. NTFS
35. In a(n) _____ backup, all files that have been modified since the last full backup are copied, and have the archive bit unset.
- a. incremental
 - b. differential
 - c. encompassing
 - d. daily
36. Which of the following is the code of acceptable behaviors users should follow while on the Internet; that is, it is the conduct expected of individuals while online?
- a. netiquette
 - b. web politesse
 - c. Internet behavior
 - d. web civility
37. Which of the following AMD processor families is *not* intended for desktop use?
- a. Turion
 - b. Phenom
 - c. Athlon
 - d. FX
38. A host in a network performs which of the following tasks?
- a. ensures satellite communications are functional
 - b. exclusively monitors wireless networks to search for data transmission errors
 - c. routes transmissions over a network to guarantee data reaches its intended destination
 - d. provides services and connections to other computers on the network
39. A chipset's North Bridge connects to a processor via the _____.
- a. Front side bus
 - b. South Bridge
 - c. PCI Bride
 - d. IO Hub

40. Which power state below saves all work to the hard drive, then powers off the system?
- C1 State
 - S0 State
 - Suspend
 - Hibernation
41. What is the purpose of an Internet Protocol address (IP address)?
- It specifies whether a computer is using a broadband network or a direct-dial network.
 - It differentiates between a server computer and a client computer and contains codes to identify whether the computer can send data or receive data.
 - It contains the protocol schema used to identify whether the computer is on a wired or wireless network.
 - It uniquely identifies the location of each computer or device connected to the Internet.
42. Which of the following is *not* a good reason to flash a motherboard's BIOS?
- Issues with system during the boot sequence
 - Motherboard features are no longer working properly
 - Computer case has been replaced
 - New processor support provided by update
43. A DNS server is able to identify which of the following?
- Every computer or device connected to the Internet
 - An IP address based on a domain name
 - The TLD for a given company
 - The browser being used by a mobile device
44. Which type of disc is a type of storage media that consists of a flat, round, portable metal disc made of metal, plastic, and lacquer that is written and read by a laser?
- solid-state
 - virtual
 - cloud
 - optical
45. Laptop batteries current use what energy storing technology?
- Lithium Ion
 - Nickel Cadmium
 - Carbon phosphate
 - Alkaline

46. Chain of custody ensures that which of the following is *true*?
- a. Evidence will not be used in court
 - b. Evidence will be discarded
 - c. Possession of evidence is tracked
 - d. Evidence has been improperly secured
47. What type of connection is not typically included for use with a KVM switch?
- a. Sound
 - b. USB
 - c. eSATA
 - d. VGA
48. A(n) _____ is a type of peer-to-peer (P2P) network, which is a network managed by each computer without centralized control.
- a. Domain
 - b. Workhome
 - c. Groupshare
 - d. Workgroup
49. The process by which sector markings are defined on a disk is known as?
- a. High-level formatting
 - b. Low-level formatting
 - c. Magnetic etching
 - d. Partitioning
50. A solid state drive uses which type of memory?
- a. NAND
 - b. RAM
 - c. DRAM
 - d. ROM



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TOTAL POINTS _____ (*100 points*)

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