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

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?
   a. backward compatible
   b. integrated
   c. multifunctional
   d. Bluetooth-enabled

8. A(n) _____ is the name of a computer and can be used in place of its IP address.
   a. host name
   b. NetBIOS name
   c. workgroup name
   d. domain name

9. Word processing software, spreadsheet software, database software, and presentation software
   are examples of what category of computer software?
   a. System software
   b. Application software
   c. Hardware coordination software
   d. 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 _____.
    a. electrical system
    b. hard drive
    c. video card
    d. sound card

11. When using the nslookup command, what kind of query takes an IP address and returns a
    domain name?
    a. Forward lookup
    b. MX lookup
    c. Reverse lookup
    d. 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.
    a. compression
    b. codec
    c. bitmap
    d. 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?
    a. hit
    b. joule
    c. spike
    d. juice

14. Some motherboards require an extra power connector for PCIe devices. How many pins is this connector?
    a. 4 or 8 pins
    b. 6 or 12 pins
    c. 6 or 8 pins
    d. 4 or 12 pins

15. Which of the following is *not* a symptom of a virus infection?
    a. Strange error messages
    b. Endless pop-ups in a web browser
    c. Hijacked web searches
    d. 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?
    a. ARPANET
    b. NSFnet
    c. LISTSERV
    d. MPEG

17. Which of the following allows access to high-speed Internet services through the cable television network?
    a. cable transceiver
    b. cable modem
    c. cable receiver
    d. cable dialer

18. The most common cause of issues with displays and video equipment is due to _____.
    a. overheating
    b. improperly seated cables
    c. lack of adequate power
    d. too much power

19. Which of the following is *not* an element of a secure password?
    a. Eight or more characters in length
    b. Mix of upper / lower case characters
    c. Use of symbols
    d. 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?
    a. GDI
    b. PCL
    c. PostScript
    d. XPS

21. Which of the following is a technology that provides high-speed Internet connection using the telephone network?
    a. DSL
    b. ISP
    c. CMOS
    d. 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.
    a. Authorization
    b. Authentication
    c. Accounting
    d. Mandatory access lists

23. Which of the following is *not* a type of digital video container file?
    a. MP4
    b. AVI
    c. VOB
    d. PNG

24. What separates the components of a domain name?
    a. spaces
    b. apostrophes
    c. commas
    d. periods

25. A Mini PCI Express slot uses how many pins on a connector?
    a. 24 pins
    b. 48 pins
    c. 52 pins
    d. 64 pins

26. Select the video connector that uses separate cables for each RGB signal:
    a. Composite
    b. Component
    c. HDMI
    d. 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?
    a. C1 State
    b. S0 State
    c. Suspend
    d. Hibernation

41. What is the purpose of an Internet Protocol address (IP address)?
    a. It specifies whether a computer is using a broadband network or a direct-dial network.
    b. It differentiates between a server computer and a client computer and contains codes to identify whether the computer can send data or receive data.
    c. It contains the protocol schema used to identify whether the computer is on a wired or wireless network.
    d. 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?
    a. Issues with system during the boot sequence
    b. Motherboard features are no longer working properly
    c. Computer case has been replaced
    d. New processor support provided by update

43. A DNS server is able to identify which of the following?
    a. Every computer or device connected to the Internet
    b. An IP address based on a domain name
    c. The TLD for a given company
    d. 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?
    a. solid-state
    b. virtual
    c. cloud
    d. optical

45. Laptop batteries current use what energy storing technology?
    a. Lithium Ion
    b. Nickel Cadmium
    c. Carbon phosphate
    d. 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 and answer keys!

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	