

INFORMATION TECHNOLOGY CONCEPTS (391)

– OPEN EVENT –

REGIONAL – 2017

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

1. Modern refrigerators, washing machines, and other appliances are controlled by integrated circuits called _____ that combine sensors with processing circuitry.
 - a. microcontrollers
 - b. microdevices
 - c. servers
 - d. microcomputers

2. Which of the following is *not* an example of an expansion port?
 - a. HDMI
 - b. Thunderbolt
 - c. USB 3.0
 - d. RAM

3. Which of the following is an *advantage* of a wired connection?
 - a. faster speeds
 - b. more dependable
 - c. more secure
 - d. all of the above

4. What type of computer should you consider purchasing if you want a portable system that is good for students and on-the-go professionals who want to create content and be productive, in addition to consuming content?
 - a. tablet
 - b. desktop
 - c. smartphone
 - d. laptop

5. Which of the following would *not* be considered an essential element of a browser?
 - a. navigation buttons
 - b. bookmark toolbar
 - c. address box
 - d. refresh button

6. The primary purpose of _____ software is to help the computer system monitor itself in order to function efficiently.
 - a. input
 - b. system
 - c. memory
 - d. application

7. Which type of network connects smart devices or consumer electronics within a range of about 30 feet (10 meters) and without the use of wires or cables?
 - a. LAN
 - b. VPN
 - c. WAN
 - d. PAN

8. The _____ number system allows digital devices to represent virtually any number simply by using 0's and 1's.
 - a. text
 - b. digital
 - c. numeric
 - d. binary

9. A(n) _____ is software that helps a peripheral device establish communication with its host device.
 - a. hot-plug
 - b. device hub
 - c. device driver
 - d. data bus

10. The term _____ refers to the part of a digital device that holds the system board.
 - a. CPU
 - b. system board
 - c. form factor
 - d. system unit

11. In a browser, _____ link to pages that you use frequently.
 - a. bookmarks
 - b. favorites
 - c. both A and B
 - d. none of the above

12. The most popular battery type used in today's electronic devices is _____.
- lithium-ion
 - alkaline
 - nickel-cadmium
 - none of the above
13. Which type of protocol provides a way to transfer files from one computer to another over any TCP/IP network, such as a LAN or the Internet?
- TCP
 - FTP
 - UDP
 - PAN
14. To turn off bold for the remainder of the text in an HTML document, what tag would you use?
- `<i>`
 - `</bold>`
 - ``
 - ``
15. Sampling _____ refers to the number of times per second that a sound is measured during the recording process.
- depth
 - rate
 - sound
 - compression
16. Which optical storage technology stores data permanently on a disc, which cannot be subsequently added to or changed?
- rewritable
 - read-only
 - recordable
 - none of the above
17. Which of the following is data that would *not* be found in a cookie?
- customer number
 - shopping cart number
 - information it reads from your hard drive
 - access date

18. In the context of bitmap graphics editing, what technique employs algorithms that pulls pixels from one area of an image and then applies them to another area?
- inpainting
 - cloning
 - noise reduction
 - image enhancement
19. _____ is a temporary holding area for data and programs.
- RISC
 - CISC
 - RAM
 - ROM
20. A web _____ is an Internet-based computer that stores website content and accepts requests from browsers.
- server
 - store
 - browser
 - site
21. What organization is the top-level authority for supervising domain name requests?
- DNS
 - ISPs
 - ICANN
 - HTTP
22. Which of the following options are well suited for using vector graphics?
- logos
 - line art
 - diagrams
 - all of the above
23. When were the original HTML specifications developed by Tim Berners-Lee?
- 2000
 - 1980
 - 1990
 - 1970

24. ASCII requires _____ bits for each character.
- seven
 - six
 - ten
 - two
25. Transmission speeds are expressed in _____, whereas storage space is expressed in _____.
- binary, numeric
 - bits, bytes
 - bytes, bits
 - none of the above
26. The part of the data bus that runs between the microprocessor and RAM is called the _____ bus.
- USB
 - local
 - network
 - expansion
27. Processors that execute one instruction at a time are considered to be _____ processors
- parallel
 - pipeline
 - serial
 - none of the above
28. The World Wide Web is a collection of HTML documents, images, videos, and sound files that can be linked to each other and accessed over the Internet using a protocol called _____.
- FTP
 - IP
 - HTML
 - HTTP
29. The electronic components of most digital devices are mounted on a circuit board called a _____.
- system board
 - motherboard
 - main board
 - all of the above

30. A link contains the _____ that links to another web page.
- CSS
 - hypertext
 - domain name
 - URL
31. Which of the following tools would be found in 3-D graphics software?
- ray tracing tools
 - rendering tools
 - surface texture tools
 - all of the above
32. The main circuits on the system board that carry data are called the _____.
- expansion bus
 - RAM
 - ROM
 - data bus
33. Suppose you wanted to run a web server or FTP server from your home. What type of IP address would you want?
- broadband
 - static
 - dynamic
 - TCP
34. If you wanted to set the text in a section of your HTML document to italics, what tag would you use?
- `<i>`
 - `<it>`
 - `<italic>`
 - none of the above
35. Which of the following is based on computer technology?
- tablets
 - game consoles
 - ebook readers
 - all of the above

36. Which type of communication protocol converts data into standard formats that can be used by applications?
- a. physical
 - b. transport
 - c. arrival
 - d. none of the above
37. _____ are designed to provide connectivity for devices within a limited area, typically within the premises of a home, office building, business, or school.
- a. LANs
 - b. WANs
 - c. BANs
 - d. PANs
38. Today's color display devices represent color using the _____ color model.
- a. PNG
 - b. RGB
 - c. BMP
 - d. none of the above
39. _____ data consists of numbers that can be used in arithmetic operations.
- a. Binary
 - b. Digital
 - c. Numeric
 - d. Text
40. Which of the following file extensions indicates the file is an HTML document?
- a. .html
 - b. .htm
 - c. .doc
 - d. both A and B
41. _____ LANs are usually arranged in a star topology with computers wired to central switching circuitry that is incorporated in modern routers.
- a. Wireless
 - b. Ethernet
 - c. Mobile
 - d. Internet

42. What is another term for vector graphics software?
- photo editing software
 - drawing software
 - digital compositing
 - all of the above
43. Which of the following is a markup language?
- XML
 - XHTML
 - SGML
 - All of the above
44. Which type of network covers a large geographical area and usually consists of several smaller networks, which might use different computer platforms and network technologies?
- WAN
 - VPN
 - PAN
 - LAN
45. Digital audio is stored in a variety of file formats, including _____.
- WAV
 - WMA
 - MP3
 - all of the above
46. Which of the following file extensions is *not* a vector graphic?
- .svg
 - .eps
 - .tif
 - .ai
47. Today's widescreen devices, such as laptops and smartphones, are designed for the 16:9 _____.
- aspect ratio
 - resolution
 - frame rate
 - all of the above

48. Which of the following is *not* used to create or edit HTML documents?
- a. Filezilla FTP client
 - b. online HTML editor
 - c. word processing software
 - d. HTML conversion utility
49. Which is a component of a search engine?
- a. indexer
 - b. web crawler
 - c. query processor
 - d. all of the above
50. What type of Internet connection do you have when upload speed differs from download speed?
- a. broadband
 - b. asymmetric
 - c. dynamic
 - d. symmetric



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TOTAL POINTS _____ (*100 points*)

**Judge/Graders: Please double check and verify
all scores and answer keys!**

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