

INFORMATION TECHNOLOGY CONCEPTS (391)

OPEN EVENT—

REGIONAL – 2020

DO NOT WRITE ON TEST BOOKLET

Multiple Choice & True/False (50 @ 2 points each)

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 ten (10) minutes orientation
No more than ninety (90) minutes testing time
No more than ten (10) minutes wrap-up

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Choose the *best* answer to the following questions.

1. Which WLAN IEEE standard has a top speed of 54Mbps using the frequency of 2.4GHz?
 - a. 802.11A
 - b. 802.11B
 - c. 802.11G
 - d. 802.11N
2. What is an Operating System?
 - a. The programs that manage the systems hardware resources
 - b. The Internet Service Provider
 - c. Software that supports the computer's basic functions
 - d. The software that developers use to compile computer languages
3. How many pins do IDE connectors have?
 - a. 25
 - b. 50
 - c. 100
 - d. 40
4. What is the standard size motherboard for desktop computers?
 - a. ATX
 - b. ITX
 - c. BTX
 - d. FTX
5. A Blu-Ray Disc can store up to _____ of data.
 - a. 20GB
 - b. 35GB
 - c. 12GB
 - d. 50GB
6. Which of the following protocols uses both TCP and UDP?
 - a. FTP
 - b. DNS
 - c. POP3
 - d. SMTP
7. Which url would lead to a banking secure site?
 - a. <http://www.bankingonline.com/secure>
 - b. <https://www.bankingonline.com>
 - c. <http.s://www.bankingonline.com>
 - d. <http://secure.www.bankingonline.com>
8. The OSI (Open Systems Interconnection) Model contains how many layers?
 - a. 1
 - b. 7
 - c. 3
 - d. 11

9. You connect your laptop to a public network at the local coffee shop. Which online task is **NOT** recommended to do when connected to an unfamiliar public network?
- Checking online banking information
 - Sending out a Tweet
 - Streaming a Twitch Channel
 - Uploading a YouTube Video
10. What software application is used to create logos for businesses?
- Microsoft Word
 - Google Sheets
 - Adobe Illustrator
 - Discord
11. How many volts could fry most PC integrated circuits?
- 200
 - 30
 - 1000
 - 200
12. In SQL, which command(s) allow you to remove an index or domain index from the database?
- ALTER INDEX
 - DROP INDEX
 - REMOVE INDEX
 - DELETE INDEX
13. What type of extinguisher should be used to put out a computer fire?
- Class B Extinguisher
 - Class A Extinguisher
 - Class C Extinguisher
 - Class K Extinguisher
14. Where do users enter data into a Microsoft Excel Spreadsheet?
- Tab
 - Cell
 - Box
 - Square
15. What is the main purpose of a computer firewall?
- Security
 - Authentication
 - Hardware Monitoring
 - Internet Connection
16. Which device is **not** considered a secondary storage device?
- Solid State Drive
 - Hard Disk Drive
 - M.2
 - RAM

17. What programming language is used to create web pages and web sites?
 - a. C++
 - b. HTML
 - c. Python
 - d. Swift
18. Which OS is **not** an Android Operating system?
 - a. Cookie
 - b. Ice Cream sandwich
 - c. KitKat
 - d. Oreo
19. Binary is also known as Base _____?
 - a. 2
 - b. 8
 - c. 16
 - d. 32
20. What type of network is used to combine multiple local area networks in a larger geographical area?
 - a. PAN
 - b. LAN
 - c. WAN
 - d. CAN
21. If you want to remove the executable permission from a user and assign a read permission to others for a file called "letter", what command would you use?
 - a. Chmod go + r, u + x letter
 - b. Chmod u - x, go + r letter
 - c. Chmod go + x, u - x letter
 - d. Chmod g - x, uo + r letter
22. Which of the following is **not** an operating system?
 - a. Linux
 - b. Windows
 - c. Mac
 - d. C
23. What program is an example of a Voice over Internet Protocol, also known as a VOIP?
 - a. Microsoft Excel
 - b. Google Docs
 - c. Skype
 - d. Adobe Photoshop
24. What is it called when you are in the second phase of software testing, this is where a sample is introduced to the intended audience?
 - a. Pilot Testing
 - b. Alpha Testing
 - c. System Testing
 - d. Beta Testing

25. CPU, also known as the Central Processing Unit, is usually made up of what type of material?
- Silver
 - Aluminium
 - Copper
 - Silicon
26. You are asked to set a trunk port on a 2960 switch, what command will you use?
- Trunk on
 - Trunk all
 - Switchport trunk on
 - Switchport mode trunk
27. During the fusing process, toner is _____:
- High pressure sprayed onto the paper
 - Electronically bonded to the paper
 - Melted into the paper
 - Glued to the paper
28. The CPU has _____ components to allow it to function correctly?
- 1
 - 2
 - 3
 - 4
29. What is the maximum frequency range for an IEEE 802.11a standard?
- 2.4Gbps
 - 5Gbps
 - 2.4GHz
 - 5GHz
30. The IP address 171.10.200.254 is considered what class of IP address?
- Class A
 - Class B
 - Class C
 - Class D
31. In Linux Command line, which option when using the rm command is used to remove a directory, including all of its subdirectories within the directory?
- b
 - o
 - r
 - p
32. You have a laser printer that needs servicing because of a printing problem. After you service a laser printer, you notice that the printer is still printing dirty prints. Which of the following would correct the problem?
- Reset the printer
 - Clean the developer tank
 - Clean the laser diode

- d. Run several blank pages
33. What type of connectors do Solid State Drives (SSD) use?
- a. USB
 - b. SATA
 - c. IDE
 - d. PCIE
34. Hexadecimal 3C is _____ in decimal?
- a. 35
 - b. 60
 - c. 90
 - d. 10
35. What is the maximum frequency range for an IEEE 802.11a standard?
- a. 2.4Gbps
 - b. 5Gbps
 - c. 2.4GHz
 - d. 5GHz
36. What is the maximum distance of 802.11g?
- a. 50 feet
 - b. 175 feet
 - c. 250 feet
 - d. 150 feet
37. For the IP address 200.10.5.68/28, what could the subnetwork address for that host be?
- a. 200.10.5.64
 - b. 200.10.5.56
 - c. 200.10.5.32
 - d. 200.10.5.0
38. What is the component in the CPU that selects, interprets, and sees the execution of the programs?
- a. Memory
 - b. Registers
 - c. Control Unit
 - d. ALU
39. You are asked to insert VLAN membership information into Ethernet frames. What command will you use to configure the switch port using the IEEE standards?
- a. Switch(config)# switchport trunk encapsulation isl
 - b. Switch(config)# switchport trunk encapsulation dot1q
 - c. Switch(config-if)# switchport trunk encapsulation isl
 - d. Switch(config-if)# switchport trunk encapsulation dot1q

40. Which of the following devices can be used to connect a computer to the Internet through a telephone line?
- Modem
 - Router
 - Server
 - Switch
41. A(n) _____ is a business which allows customers to access the Internet through its own network.
- ISP
 - IP
 - IBP
 - IC3
42. What command can you run in a windows computer to see what Direct X you are using?
- dirxrun
 - dxdiag
 - diagdx
 - rundirx
43. What computer programming language is considered a dynamic language?
- C++
 - Java
 - Python
 - Assembly
44. You notice that your computer is running slow, what software can you run to see what resources are being used?
- Device Manager
 - Task Manager
 - Disc Manager
 - Disc Check
45. You have been asked to write a memo for work, what application will you use?
- Microsoft Publisher
 - Microsoft PowerPoint
 - Microsoft Excel
 - Microsoft Word
46. According to the OSI model, encryption and decryption of data is performed in the _____ layer.
- Application
 - Session
 - Transport
 - Presentation

47. If a computer does not have the _____, it will not have the ability to “boot”.
- a. Assembly
 - b. Operating System
 - c. Drivers
 - d. Compiler
48. The data packet that travels between a browser and a web server, that tracks information about the users behavior is known as _____.
- a. Pie
 - b. Adware
 - c. Spyware
 - d. Cookie
49. The binary number 11100011 is _____ in decimal?
- a. 220
 - b. 191
 - c. 227
 - d. 230
50. There are _____ used by the IPV6 address?
- a. 32 bits
 - b. 64 bits
 - c. 128 bits
 - d. 256 bits



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Multiple Choice & Short Answer:

Multiple Choice (50 @ 2 points each) (100 points)

TOTAL POINTS (100 points)

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

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Answer Key

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