

**Student Name:** \_\_\_\_\_

**Class Period:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Technical Skill Assessment Information Technology Standard IT 1.7 Recognize legal, social, cultural and ethical issues related to information technology. (3A-IC24)**

**Student Learning Target: I can identify the possible consequences of legal and ethical decisions related to technology.**

**Proficiency Scale**

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|-----------------------------------------------------------------------------------------------|
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| 4.0: Analyze an ethical/legal scenario and recommend and support possible courses of action.  |
| 3.0: Identify the possible consequences of legal and ethical decisions related to technology. |
| 2.0: Identify possible use of software/intellectual property based on licensing.              |
| 1.0: Identify basic forms of software licensing/protections.                                  |
| 0.0: Not attempted                                                                            |

1. A business has come up with a new logo for the company and they want to protect the logo as part of their brand. Which of the following protections should they use?
  - A. Patent
  - B. Trademark
  - C. Copyright
  - D. Intellectual property
2. What is the collective name for creations that are not the intellectual property of anybody?
  - A. Royalty Free
  - B. Unclaimed Works
  - C. Public Domain
  - D. Proprietary
3. A developer wants to take existing code written by another person and add some features to meet their needs. Which of the following software licensing models allows them to make changes and publish their own version?
  - A. Subscription
  - B. Software-as-a-Service (SaaS)
  - C. Proprietary
  - D. Open-source
4. Which of the following is NOT a part of a typical single-user license agreement?
  - A. You can make one copy of the software as a backup.
  - B. You can rent or lease the software.
  - C. You cannot install the software on a network.
  - D. You cannot export the software.

5. Your company has 50 employees who need a software update installed. Due to a miscommunication your purchasing office only paid for 25 license updates. This is an enterprise paper license and there is no mechanism that enforces a limit to the number of times the key can be used. You decide to update all 50 users. Which of the following are possible consequences of this decision (select two)?

- A. There are no consequences. By law, you are allowed 1 to 3 activations per user.
- B. You risk losing your job.
- C. Your company is exposed to litigation by violating the software license agreement.
- D. The software company will never detect the violation so negative consequences are unlikely.
- E. The software will eventually stop working properly for the 25 extra updates you installed.

6. Your supervisor (from question 5) has directed you to update the remaining 50 computers in the building. Discuss the legal, social, and ethical dilemmas you might face in this situation. Provide and support two arguments for and two arguments against doing what your supervisor tells you.

**Technical Skill Assessment Information Technology Standard IT 1.9 Understand basic software applications.**

**Student Learning Target: I can demonstrate working knowledge and application of general office software programs.**

**Proficiency Scale**

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| 4.0: Demonstrate the ability to perform advanced functions in office application software programs.                      |
| 3.0: Demonstrate working knowledge and application of general office application software programs.                      |
| 2.0: Identify collaborative tools, online resources, and general office application software programs and their purpose. |
| 1.0: Identify collaborative tools, online resources, and office application software programs.                           |
| 0.0: Not attempted                                                                                                       |

1. Productivity suites typically include, at minimum, all of the following EXCEPT \_\_\_\_\_.
  - a. Spreadsheet
  - b. word processing
  - c. Presentation
  - d. project management
2. Which of the following is NOT an example of an operating system?
  - a. Android
  - b. Microsoft
  - c. Windows
  - d. Linux
3. Which of the following lists the basic computing and processing steps in order?
  - a. Input, retrieval, output, and storage
  - b. Input/output, processing, and storage
  - c. Input, processing, output, and storage
  - d. Input, retrieval, processing, and storage
4. Which type of digital picture can be scaled to any size without losing quality?
  - a. Vector
  - b. Transparent
  - c. Raster
  - d. High-res

***Match the storage device types with the description and benefits for each question.***

5. A thick magnetic disk made of aluminum platters. Uses read/write heads to access data stored on the platters.
  - a. Hard disk drive (HDD)
  - b. Solid state drive (SSD)
  - c. Optical disc drive
6. A flash device with storage capacity similar to a small hard drive.
  - a. Hard disk drive (HDD)
  - b. Solid state drive (SSD)
  - c. Optical disc drive
7. Uses laser to read and write information stored in the form of pits in their reflective coating
  - a. Hard disk drive (HDD)
  - b. Solid state drive (SSD)
  - c. Optical disc drive

8. Up to several TB in storage capacity and cost per MB is cheap.
  - a. Hard disk drive (HDD)
  - b. Solid state drive (SSD)
  - c. Optical disc drive
9. Faster than other devices. No moving parts. Last longer than other storage devices.
  - a. Hard disk drive (HDD)
  - b. Solid state drive (SSD)
  - c. Optical disc drive
10. Ideal for music and video. Portable and cheap with a long shelf life.
  - a. Hard disk drive (HDD)
  - b. Solid state drive (SSD)
  - c. Optical disc drive
11. Which of the following provides the least amount of storage?
  - a. Megabyte
  - b. Terabyte
  - c. Kilobyte
  - d. Gigabyte
12. Which of the following provides the greatest amount of storage?
  - a. Megabyte
  - b. Terabyte
  - c. Kilobyte
  - d. Gigabyte

*Using application software of your choice (Office or Google) complete the following:*

**SITUATION:**

*You have just received the opportunity to purchase a “new” vehicle. However, you may not spend more than \$15,000 including tax and tags. The tax is 7% on the base car price, the tags are 5% of the base price.*

**Again the total price cannot be over \$15,000**

**Create a layout that looks like this:**

|             | NAME of CAR<br>MODEL | NAME of CAR<br>MODEL | NAME of CAR<br>MODEL |
|-------------|----------------------|----------------------|----------------------|
| Base Price  |                      |                      |                      |
| Tax         |                      |                      |                      |
| Tags        |                      |                      |                      |
| Final Price |                      |                      |                      |

Select three vehicles from below and enter their information in the first 2 rows.



New 2020 Chevy Spark Hatchback  
Base Price: \$13,322



Used 2016 Jeep Compass  
Base Price: \$10,000



Used 2016 GMC Terrain  
Base Price: \$10,599



Used 2014 Chevy Cruze  
Base Price: \$9,998



Used 2013 Hyundai Veloster  
Base Price: \$10,400



Used 2014 Volkswagen Passat  
Base Price: \$12,500



Used 2007 GMC Sierra Work Truck  
Base Price: \$12,300



Used 2018 Kia Soul  
Base Price: \$11,600

**Now:**

- ☐ Format all monetary cells as currency format with 2 decimal places.
- ☐ Insert correct formulas to calculate the costs for each model (formulas should be entered in all cells except those for Base Price).
- ☐ Apply a professional looking design scheme and formatting to your table.

**Select one of the following tasks to complete:**

- ☐ Research and insert a formula for what your car payment would be for each vehicle if the APR was 2.8% and the loan was for 5 years.
- ☐ Insert a pie/bar chart showing a comparison of the final prices of each car in the current year.

**Complete the following tasks:**

- ☐ Decide which vehicle you would purchase. Create a short presentation, using presentation software. Include:
  - ☐ Title slide (car you selected with picture of car)
  - ☐ Information slide (Year, make, model, Base Price and Final Price)
  - ☐ Information slide with monthly payment information or price comparison table inserted
  - ☐ Conclusion slide with your reasoning for selecting the vehicle you selected.
- ☐ Compose an email to your teacher, include the following:
  - ☐ Professional writing and formatting including subject line, salutation, explanation of the contents of the message, and appropriate closing
  - ☐ Attach (if Microsoft Office was used) or include links to files (if Google was used) of the spreadsheet and presentation you created above.
  - ☐ Send the email with your files to your instructor.

**Technical Skill Assessment Information Technology Standard IT 2.2 Use logic to solve problems and demonstrate trouble-shooting skills. (3A-CS-03)**

**Student Learning Target: I can use logic to solve problems and demonstrate trouble-shooting skills related to technology.**

**Proficiency Scale**

|                                                                                              |
|----------------------------------------------------------------------------------------------|
|                                                                                              |
| 4.0: Apply troubleshooting techniques to solve a problem.                                    |
| 3.0: Demonstrate the ability to use logic and trouble-shooting to solve IT related problems. |
| 2.0: Determine the next logical step in trouble-shooting an IT problem.                      |
| 1.0: Identify a situation where trouble-shooting an IT problem is needed.                    |
| 0.0: Not attempted                                                                           |

1. The troubleshooting methodology starts by identifying the problem. The first step in identifying the problem is to gather information. Which of the following is the NEXT step?
  - a. Establish a theory of probable cause
  - b. Establish a plan of action
  - c. Identify symptoms
  - d. Duplicate the problem, if possible
2. Jenna, a technician, is helping a customer troubleshoot an issue where a server will intermittently become inaccessible to employees. She has completed researching the knowledge bases available. What should Jenna do NEXT as part of standard troubleshooting methodology?
  - a. Identify the problem
  - b. Test the theory to determine the cause
  - c. Establish a theory of probable cause
  - d. Establish a plan of action to solve the problem
3. A customer has brought a computer in to be repaired. He said he thinks that the sound card has stopped working because no audio is produced when music, video, or DVDs are played. Which troubleshooting step should you take first? (select up to 2)
  - a. Replace the sound card with a known-good spare
  - b. Verify that the volume isn't muted
  - c. Download and install the latest sound card drivers
  - d. Verify that the speakers are plugged into the correct jack and are powered on
  - e. Verify that no IRQ or I/O port address conflicts exist between the card and other devices in the system
4. You are on a laptop computer and your Wifi is not connecting. What steps will you take to troubleshoot that problem? Assume that the first 3 are unsuccessful (provide 4 steps). Why did you choose to approach the problem with this method?

**Technical Skill Assessment Information Technology Standard IT 2.6 Demonstrate the basic design process of a project.**

**Student Learning Target: I can demonstrate the basic design process of a project using appropriate methodologies, prototypes and algorithms.**

**Proficiency Scale**

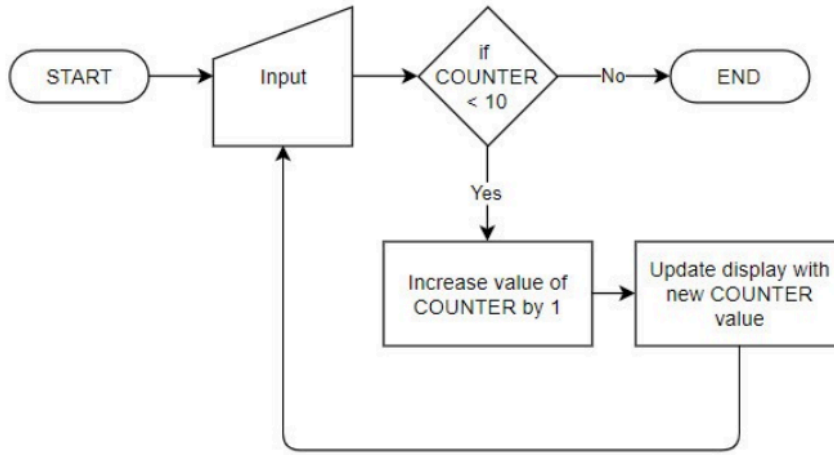
|                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------|
|                                                                                                                    |
| 4.0: Analyze the design process of a project based on methodologies used.                                          |
| 3.0: Demonstrate the basic design process of a project using appropriate methodologies, prototypes and algorithms. |
| 2.0: Determine the next logical step as it relates to the design process.                                          |
| 1.0: Identify basic terminologies related to the design process.                                                   |
| 0.0: Not attempted                                                                                                 |

1. What is the main purpose of agile methodologies?
  - a. To divide large IT projects into smaller, more manageable projects as part of an interactive process
  - b. To make sure the entire IT project follows a series of sequential phases, from preliminary analysis to implementation
  - c. To incorporate artificial intelligence into the IT design and development process
  - d. To control the costs of IT projects
2. Which of the following is used to model real-world objects into computer code?
  - a. Pseudocode
  - b. Flow Charting
  - c. Algorithms
  - d. Object-oriented programming
3. A user is shopping online and has added two items to the cart. When the user clicks the Checkout button, the shopping cart programming logic checks to see if the user is logged in, if they are the checkout process continues, otherwise the user is prompted to sign in. Which of the following describes the logical component being used?
  - a. Programming array
  - b. Looping
  - c. Encapsulation
  - d. Branching
4. Which of the following describes this snippet of code?

**If COUNTER is less than ten:**  
**Increase the value of COUNTER by 1**  
**Change the displayed number to new COUNTER value**

  - a. Pseudocode
  - b. Markup language
  - c. C# Code
  - d. Query Language

5. Which of the following flowchart concepts is depicted below?



- a. Arrays
- b. Sequence
- c. Vectors
- d. Methods

Karen wants to make an ice cream sundae for the people in her family. She needs your help:

- 6. Decompose the activity of making ice cream sundaes into smaller steps and list them below.
- 7. Now that you have decomposed the steps to making an ice cream sundae, write pseudocode for the step that would involve finding out what each member of Karen's family wants on their sundae.