

CSCI 1100 – Using Information Technology

Comprehensive Study Guide

# Topics

## Digital Literacy

* Evaluating online information
* Critical thinking in the digital age
* Navigating digital platforms and interfaces
* Understanding digital trends and their impacts

## Tech Product Literacy

* Basic computer components
* Mobile device hardware
* Peripheral devices and connectivity
* Troubleshooting common hardware issues

## Introduction to Programming

* Basic programming concepts
* Common programming languages overview
* Simple algorithm design
* Debugging basics

## Web Literacy

* Roles of HTML, CSS, and browsers
* HTML's function in webpage structure
* CSS's role in styling webpages
* Browser responsibilities in rendering webpages
* Developer tools for inspecting and debugging

## The Connected World

* Basic network concepts
* Types of networks (LAN, WAN, etc.)
* Internet protocols
* Cloud computing basics

## Data Literacy

* Understanding data sources and data types.
* Understanding the context in which data is used.
* Basic knowledge of quantitative and qualitative data, the DIKW model, and how it relates to the data lifecycle.
* Accurately interpreting trends and behaviors and making informed inferences.
* Storytelling with data, how to use common chart types, and how charts are commonly manipulated.

## Digital Content Creation

* Types of digital content (text, images, video, audio)
* Basic principles of design
* Content creation tools and platforms
* Copyright and licensing for digital content

## Artificial Intelligence and Machine Learning

* Basic AI concepts and terminology
* Machine learning algorithms and applications
* Ethical considerations in AI development
* AI's impact on various industries

## Cybersecurity and Privacy

* Common cyber threats
* Best practices for online security
* Data privacy concepts
* Password management and two-factor authentication

## Emerging Technologies

* Overview of current emerging tech (e.g., IoT, blockchain, VR/AR)
* Potential impacts on society and industry
* Ethical considerations of new technologies
* Future trends in technology

## Digital Citizenship

* Online etiquette and communication
* Digital footprint awareness
* Responsible use of social media
* Copyright and fair use in the digital world

## Tools For Technology: Microsoft Office Suite

### Microsoft Word

* Basic document operations (saving, file formats)
* Text formatting and styling
* Page layout and orientation
* Find and Replace functionality
* Headers, footers, and page numbers
* Using grammar checking, citation tooling, and table of contents.

### Microsoft PowerPoint

* Creating and editing slides
* Adding and formatting text, images, and multimedia
* Applying themes and designs
* Customizing the design through the Slide Master
* Applying transitions and animations
* Presenting slideshows

### Microsoft Excel

* Basic spreadsheet operations
* Entering, formatting, and transforming data
* Using formulas and functions
* Creating charts and graphs

# Sample Questions

The sets of multiple-choice questions provided below are similar in content to questions that are featured on the proficiency exam, however, these question sets do not reflect the complete set of concepts and knowledge covered in the topics we teach in CSCI 1100 or that we feature in the proficiency exam. While reviewing these questions can contribute to your success on the proficiency exam, familiarity with the topics as they are described above is necessary for that success.

## Digital Literacy Questions

1. What is the term for the ability to identify false or misleading information online?

a) Digital detective

b) Information literacy

c) Cyber skepticism

d) Web wisdom

2. What does it mean to "think critically" about online information?

a) To always assume information is false

b) To evaluate the credibility and accuracy of information

c) To share information quickly

d) To ignore all online information

3. What is a filter bubble?

a) A type of internet security

b) A social media feature

c) A state of intellectual isolation due to personalized online experiences

d) A method of water purification

4. What is digital literacy?

a) The ability to read digital clocks

b) The ability to use digital technologies to find, evaluate, create, and communicate information

c) The skill of typing quickly

d) The knowledge of computer programming languages

5. What is the purpose of fact-checking websites?

a) To create fake news

b) To verify the accuracy of information

c) To censor online content

d) To track internet usage

## Digital Literacy Answer Key

1. b) Information literacy

2. b) To evaluate the credibility and accuracy of information

3. c) A state of intellectual isolation due to personalized online experiences

4. b) The ability to use digital technologies to find, evaluate, create, and communicate information

5. b) To verify the accuracy of information

## Tech Product Literacy Questions

1. What is RAM in a computer?

a) Random Access Memory

b) Read-Only Memory

c) Rapid Application Management

d) Remote Access Module

2. What does CPU stand for?

a) Computer Processing Unit

b) Central Processing Unit

c) Control Processing Unit

d) Core Processing Unit

3. Which of these is an input device?

a) Monitor

b) Printer

c) Mouse

d) Speakers

4. What is the function of a GPU?

a) To process and render graphics

b) To store data long-term

c) To connect to the internet

d) To run the operating system

5. What is the purpose of a heat sink in a computer?

a) To generate heat

b) To store data

c) To dissipate heat from components

d) To boost processing speed

## Tech Product Literacy Answer Key

1. a) Random Access Memory

2. b) Central Processing Unit

3. c) Mouse

4. a) To process and render graphics

5. c) To dissipate heat from components

## Introduction to Programming Questions

1. What is a variable in programming?

a) A type of computer

b) A storage location paired with an associated name

c) A mathematical equation

d) A type of loop

2. Which of these is NOT a common programming language?

a) Python

b) Java

c) MicrosoftWord

d) JavaScript

3. What is a loop in programming?

a) A type of data structure

b) A way to comment code

c) A method of connecting to the internet

d) A sequence of instructions that is repeated

4. What does IDE stand for in programming?

a) Intelligent Design Engine

b) Integrated Development Environment

c) Internet Data Exchange

d) Internal Database Extractor

5. What is debugging in programming?

a) The process of finding and fixing errors in code

b) Removing insects from a computer

c) Creating a new program

d) Optimizing code for faster performance

## Introduction to Programming Answer Key

1. b) A storage location paired with an associated name

2. c) MicrosoftWord

3. d) A sequence of instructions that is repeated

4. b) Integrated Development Environment

5. a) The process of finding and fixing errors in code

## Web Literacy Questions

1. What does HTML stand for?

a) Hyper Text Markup Language

b) High Tech Modern Language

c) Hyper Transfer Markup Language

d) Home Tool Markup Language

2. Which language is primarily used for styling web pages?

a) JavaScript

b) Python

c) CSS

d) PHP

3. What's the purpose of the <body> tag in HTML?

a) To define the document's head section

b) To create a hyperlink

c) To contain all the visible contents of a web page

d) To define a paragraph

4. Which tool in web browsers allows developers to inspect and modify HTML and CSS in real-time?

a) Task Manager

b) Developer Tools

c) Plugin Manager

d) Network Monitor

5. What does CSS stand for?

a) Computer Style Sheets

b) Creative Style Sheets

c) Cascading Style Sheets

d) Colorful Style Sheets

## Web Literacy Answer Key

1. a) Hyper Text Markup Language

2. c) CSS

3. c) To contain all the visible contents of a web page

4. b) Developer Tools

5. c) Cascading Style Sheets

## The Connected World Questions

1. What does LAN stand for?

a) Large Area Network

b) Local Area Network

c) Long Access Node

d) Latency Adjustment Network

2. Which protocol is used for sending email?

a) HTTP

b) FTP

c) SMTP

d) SSH

3. What's the purpose of an IP address?

a) To identify a specific device on a network

b) To encrypt data

c) To compress files

d) To block unwanted emails

4. What is cloud computing?

a) Weather forecasting technology

b) A type of wireless network

c) Delivery of computing services over the internet

d) A programming language

5. Which of these is NOT a type of network topology?

a) Star

b) Ring

c) Pyramid

d) Bus

## The Connected World Answer Key

1. b) Local Area Network

2. c) SMTP

3. a) To identify a specific device on a network

4. c) Delivery of computing services over the internet

5. c) Pyramid

## Data Literacy Questions

1. Which of the following best describes the difference between quantitative and qualitative data?

a) Quantitative data is numerical, qualitative data is descriptive

b) Quantitative data is always more reliable than qualitative data

c) Qualitative data can be easily counted, quantitative data cannot

d) There is no significant difference between the two

2. In the DIKW model, what does the "W" stand for?

a) Work

b) Wisdom

c) Writing

d) Workflow

3. When interpreting a trend in data, which of the following is most important to consider?

a) The aesthetic appeal of the chart

b) The source and context of the data

c) The opinions of colleagues

d) The most recent data point only

4. Which chart type is most appropriate for showing the composition of a whole?

a) Line chart

b) Scatter plot

c) Pie chart

d) Bar graph

5. What is a common way that charts can be manipulated to mislead?

a) Using appropriate scales on axes

b) Including all relevant data points

c) Truncating the y-axis to exaggerate differences

d) Using colors consistently

## Data Literacy Answer Key

1. a) Quantitative data is numerical, qualitative data is descriptive

2. b) Wisdom

3. b) The source and context of the data

4. c) Pie chart

5. c) Truncating the y-axis to exaggerate differences

## Digital Content Creation Questions

1. Which of these is NOT a common type of digital content?

a) Blog posts

b) Infographics

c) Podcasts

d) Faxes

2. What does SEO stand for in content creation?

a) Social Engagement Opportunity

b) Search Engine Optimization

c) Secure Editing Option

d) Standard Editorial Outline

3. What is a content management system (CMS)?

a) A tool for organizing physical documents

b) A software for creating and managing digital content

c) A type of digital camera

d) A method of content distribution

4. Which file format is commonly used for lossless image compression?

a) JPEG

b) PNG

c) GIF

d) BMP

5. What is a call-to-action (CTA) in digital content?

a) A phone call to discuss content

b) An instruction to the audience to take a specific action

c) A type of video content

d) A method of content encryption

## Digital Content Creation Answer Key

1. d) Faxes

2. b) Search Engine Optimization

3. b) A software for creating and managing digital content

4. b) PNG

5. b) An instruction to the audience to take a specific action

## Artificial Intelligence and Machine Learning Questions

1. What is machine learning?

a) A type of computer hardware

b) A programming language

c) A subset of AI where systems learn from data

d) A database management system

2. Which of these is NOT a common type of machine learning?

a) Supervised learning

b) Unsupervised learning

c) Reinforcement learning

d) Quantum learning

3. What is a neural network in AI?

a) A biological brain structure

b) A computer networking protocol

c) A machine learning model inspired by the human brain

d) A type of computer virus

4. What does AI bias refer to?

a) The preference of AI for certain brands

b) Unfair prejudice in AI systems' decisions or predictions

c) The tilt of a robot's head

d) The angle of a computer screen

5. Which field focuses on making AI systems that can be trusted and explained?

a) Explainable AI

b) Trustworthy Computing

c) Blockchain Technology

d) Quantum Computing

## Artificial Intelligence and Machine Learning Answer Key

1. c) A subset of AI where systems learn from data

2. d) Quantum learning

3. c) A machine learning model inspired by the human brain

4. b) Unfair prejudice in AI systems' decisions or predictions

5. a) Explainable AI

## Cybersecurity and Privacy Questions

1. What is phishing?

a) A type of fishing sport

b) An attempt to obtain sensitive information by disguising as a trustworthy entity

c) A method of encrypting data

d) A type of computer virus

2. What does two-factor authentication provide?

a) Faster internet speed

b) Better graphics quality

c) An extra layer of security

d) Automatic software updates

3. What is a firewall?

a) A physical wall to protect against fire

b) A security system that monitors and controls network traffic

c) A type of computer virus

d) A backup power system

4. What does HTTPS stand for?

a) Hyper Text Transfer Protocol Secure

b) High Tech Transfer Protocol System

c) Hyper Text Transmission Protocol Service

d) Home Transfer Protocol Secure

5. What is a VPN used for?

a) Video Processing Network

b) Virtual Private Network

c) Visual Programming Navigation

d) Vital Program Notification

## Cybersecurity and Privacy Answer Key

1. b) An attempt to obtain sensitive information by disguising as a trustworthy entity

2. c) An extra layer of security

3. b) A security system that monitors and controls network traffic

4. a) Hyper Text Transfer Protocol Secure

5. b) Virtual Private Network

## Emerging Technologies Questions

1. What is the Internet of Things (IoT)?

a) A new version of the internet

b) A network of physical objects embedded with sensors and software

c) A type of social media platform

d) A cloud storage service

2. What is blockchain primarily known for?

a) A type of computer hardware

b) A social media platform

c) A distributed ledger technology

d) A programming language

3. What does VR stand for in technology?

a) Very Rapid

b) Virtual Reality

c) Visual Rendering

d) Variable Resolution

4. What is edge computing?

a) A type of computer monitor

b) Processing data near the source of data generation

c) A method of sharpening digital images

d) A type of internet connection

5. What is quantum computing?

a) Very fast traditional computing

b) Computing using quantum-mechanical phenomena

c) A type of cloud computing

d) A method of cooling computer processors

## Emerging Technologies Answer Key

1. b) A network of physical objects embedded with sensors and software

2. c) A distributed ledger technology

3. b) Virtual Reality

4. b) Processing data near the source of data generation

5. b) Computing using quantum-mechanical phenomena

## Digital Citizenship Questions

1. What is a digital footprint?

a) A measure of computer processing power

b) The trail of data you leave online

c) A type of computer virus

d) A digital signature

2. What does Creative Commons provide?

a) A platform for creating digital art

b) A set of licenses for sharing and using creative work

c) A social media network for artists

d) A software for editing videos

3. What is cyberbullying?

a) A type of computer virus

b) The use of digital technologies to deliberately upset someone

c) An online gaming strategy

d) A method of digital marketing

4. What is netiquette?

a) A type of internet connection

b) Rules for polite behavior online

c) A website building tool

d) An antivirus software

5. What does it mean to be a good digital citizen?

a) Spending all your time online

b) Having the fastest internet connection

c) Using technology responsibly and respectfully

d) Owning the latest gadgets

## Digital Citizenship Answer Key

1. b) The trail of data you leave online

2. b) A set of licenses for sharing and using creative work

3. b) The use of digital technologies to deliberately upset someone

4. b) Rules for polite behavior online

5. c) Using technology responsibly and respectfully

## Microsoft Word Questions

1. Which tab would you use to change the page orientation?

a) Home

b) Insert

c) Layout

d) Review

2. What is the default file extension for Microsoft Word documents?

a) .doc

b) .docx

c) .txt

d) .rtf

3. Where can you find the 'Find and Replace' feature?

a) Home tab

b) Insert tab

c) Review tab

d) View tab

4. Which view shows your document as it would appear when printed?

a) Draft

b) Web Layout

c) Print Layout

d) Outline

5. How can you quickly apply the same formatting to multiple parts of your document?

a) Copy and Paste

b) Format Painter

c) Style Gallery

d) Quick Format

## Microsoft Word Answer Key

1. c) Layout

2. b) .docx

3. a) Home tab

4. c) Print Layout

5. b) Format Painter

## Microsoft PowerPoint Questions

1. Which view allows you to see all your slides at once in thumbnail form?

a) Normal view

b) Slide Sorter view

c) Reading view

d) Slide Show view

2. What is the term for the visual transition between slides?

a) Animation

b) Morph

c) Transition

d) Progression

3. Which feature allows you to create a non-linear presentation?

a) Slide Linking

b) Hyperlinks

c) Action Buttons

d) All of the above

4. What's the best way to ensure your presentation is consistent in style?

a) Manually format each slide

b) Use a Theme

c) Copy and paste formatting

d) Use only default layouts

5. Which view is best for adding speaker notes to your slides?

a) Normal view

b) Slide Sorter view

c) Notes Page view

d) Outline view

## Microsoft PowerPoint Answer Key

1. b) Slide Sorter view

2. c) Transition

3. d) All of the above

4. b) Use a Theme

5. c) Notes Page view

## Microsoft Excel Questions

1. What's the correct way to start a formula in Excel?

a) =

b) +

c) -

d) \*

2. Which function would you use to find the highest value in a range of cells?

a) AVERAGE

b) SUM

c) MAX

d) COUNT

3. What does the '$' symbol do when used in a cell reference?

a) Adds a currency format

b) Makes the reference absolute

c) Indicates a percentage

d) Allows text entry

4. Which chart type is best for showing parts of a whole?

a) Line chart

b) Bar chart

c) Pie chart

d) Scatter plot

5. What's the term for a predefined formula in Excel?

a) Equation

b) Function

c) Calculation

d) Algorithm

## Microsoft Excel Answer Key

1. a) =

2. c) MAX

3. b) Makes the reference absolute

4. c) Pie chart

5. b) Function