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A PEARSON VUE BUSINESS

IC3 Computing Fundamentals

Objective Domains

1. Mobile Devices

1.1 Understand cellular phone concepts

   1.1.1   Recognize mobile device network-connection options
   1.1.2   Recognize the requirements of cellular connections
   1.1.3   Distinguish the capabilities and limitations of cellular phones

1.2 Understand cellular-enabled tablet concepts

   1.2.1   Distinguish the capabilities and limitations of cellular tablets
   1.2.2   Recognize the use of apps on tablets
   1.2.3   Identify the benefits and limitations of WiFi and cellular tablet connections

1.3 Understand smartphone concepts

   1.3.1   Distinguish the capabilities and limitations of smartphones
   1.3.2   Recognize the use of apps on smartphones

1.4 Understand hardwired and general phone concepts

   1.4.1   Identify the capabilities and limitations of hardwired phones
   1.4.2   Recognize elements of a professional voicemail message

1.5 Recall and identify instant messaging concepts

   1.5.1   Identify the capabilities and limitations of SMS and MMS
   1.5.2   Recognize service requirements for instant messaging from mobile devices
   1.5.3   Recognize the purpose of instant messaging clients

1.6 Configure notifications

   1.6.1   Identify methods of creating notifications that will appear on mobile devices
   1.6.2   Configure notifications on mobile devices
   1.6.3   Configure notifications in Outlook

2. Hardware Devices

2.1 Identify the purposes of servers, desktop computers, and laptop computers

2.2 Understand device memory and storage concepts

   2.2.1   Recognize the purpose of device memory
   2.2.2   Identify activities that increase or decrease available device memory
   2.2.3   Identify problems that can be resolved by increasing device memory
   2.2.4   Recognize the purpose of storage devices
   2.2.5   Identify typical storage devices
   2.2.6   Identify activities that increase or decrease available device storage space
   2.2.7   Identify problems that can be resolved by increasing storage space

2.3 Identify peripheral device concepts

   2.3.1   Identify peripheral devices that connect to desktop computers, laptop computers,

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tablets, smartphones, and cellular phones

2.3.2 Recognize the types of data transmission supported by different connections

2.3.3 Identify peripheral devices that connect through audio, Ethernet, parallel, serial, PS/2, DVI, VGA, HDMI, and USB ports

2.3.4 Identify peripheral devices that connect through Bluetooth, WiFi, and infrared connections

2.4 Identify the pupose of Ethernet ports

2.5 Connect devices to a wireless network

2.6 Understand power management concepts
Note: On a Windows 10 computer

2.6.1 Analyze power management options

2.6.2 Identify factors that affect the battery life of a laptop

2.6.3 Modify power settings

2.6.4 Define and distinguish processes for shutting down, restarting, sleeping, or hibernating a computer

2.7 Illustrate device driver concepts

2.8 Identify platform differences

2.8.1 Compare device operating systems (Mac, Windows, Linux, iOS, Android)

2.9 Identify platform limitations

2.9.1 Identify media compatibility issues

2.9.2 Identify device limitations that affect application performance

2.10 Identify network connection concepts

2.10.1 Compare hardwired, wireless, and cellular networks

2.10.2 Distinguish between Internet service providers and cellular providers

2.11 Identify Internet connection concepts

2.11.1 Identify the hardware elements and services necessary to connect to a hardwired, wireless, or cellular network

2.11.2 Recognize the purpose of modems, routers, and network interface cards

2.11.3 Recognize the concepts of bandwidth

2.11.4 Identify system elements that affect Internet connection speed

2.11.5 Identify the types of networks typically present in a business environment

2.12 Identify various hardware configurations

2.12.1 Evaluate CPU, RAM, hard drive type and size, video card

2.13 Understand touchscreen device concepts

2.13.1 Identify features of touchscreen-enabled devices

2.13.2 Distinguish the capabilities and limitations of input using touch, keyboard, and mouse

3. Computer Software Architecture

3.1 Understand operating system updates

3.2 Recognize the scope of settings

3.2.1 Analyze the effect of changing system settings

3.2.2 Analyze the effect of changing application settings

3.3 Manage desktop settings and windows

3.3.1 Personalize the desktop

3.3.2 Configure a screensaver

3.3.3 Change the screen resolution

3.3.4 Set the desktop background

3.3.5 Minimize, maximize, and resize windows

3.4 Configure application options
Note: With Microsoft Office 2016 applications.

3.4.1 Add a command to the Quick Access Toolbar

3.4.2 Change the AutoSave frequency

3.4.3 Set the default font size

3.4.4 Configure print settings

3.5 Create and manage user accounts

3.5.1 Set up the appropriate user account type

3.5.2 Modify user account settings

3.6 Manage files and folders

3.6.1 Identify file name extensions and file formats

3.6.2 Identify the effects of file permissions

3.6.3 Move, copy, delete and rename files and folders

3.6.4 Create folders

3.7 Manage scanned documents

3.7.1 Recognize document-scanning concepts

3.7.2 Identify appropriate file formats for scanned documents

3.8 Navigate Windows menus

3.8.1 Use the Context Menus

3.9 Find files

3.9.1 Locate files on a computer by using built-in search functionality

3.9.2 Restrict search results by defining search options

3.9.3 Recall the default file download location

3.10 Understand administrative rights and permissions

3.10.1 Distinguish between administrative rights and standard user rights

3.10.2 Recognize the purposes of rights and permissions on an individual computer and within an organization

3.11 Understand IP address concepts

3.11.1 Recognize the purpose and format of IP addresses

3.12 Manage software installations

3.12.1 Know how to install, uninstall, update, and repair software

3.12.2 Identify software installation locations and media

3.13 Troubleshoot basic computer problems

3.13.1 Recognize initial problem-solving techniques for hardware and software

3.13.2 Identify problems using the correct terminology

3.13.3 Use the troubleshooting Wizards

3.13.4 Identify the IP address of a computer

3.13.5 Identify the network connection speed of a computer

4. Backup and Restore

4.1 Understand file backup concepts

4.1.1 Identify reasons for backing up files

4.1.2 Identify the available file backup locations and media

4.1.3 Recognize the benefits and limitations of backing up files to the cloud, a network share, a portable hard drive, a CD or DVD, a USB drive, and the local computer

4.2 Back up files

4.2.1 Identify the available file backup utilities

4.2.2 Configure scheduled backups of files by using Windows Backup

4.2.3 Configure File History to back up files

4.3 Understand system backup, restore, and reformatting processes

4.3.1 Recognize the concepts of backing up and restoring computer system settings

4.3.2 Create a system restore point

4.3.3 Restore a computer to a system restore point

4.3.4 Recognize the concept and effect of restoring a computer or mobile device to the factory default settings

4.3.5 Recognize the concept and effect of reformatting a storage device

4.3.6 Reformat a flash drive

5. File Sharing

5.1 Manage file transfer

5.1.1 Identify file transfer options including network share, cloud storage, portable storage drive, CD, DVD, email

5.1.2 Identify the capabilities and limitations of each file transfer option

5.1.3 Recognize the security implications of each file transfer option

5.1.4 Copy a file to/from a network share, cloud storage location, and portable storage drive

5.1.5 Generate a link to a file in cloud storage

5.2 Perform file compression and extraction

5.2.1 Recognize the purpose and effect of file compression/zipping of files and folders

5.2.2 Identify situations in which you should compress/zip files before transferring them

5.2.3 Compress and extract files

6. Cloud Computing

6.1 Understand cloud concepts

6.1.1 Define cloud

6.1.2 Identify the requirements for accessing the cloud

6.2 Understand cloud storage concepts

6.2.1 Identify the benefits of cloud storage

6.2.2 Identify the requirements for using cloud storage

6.3 Manage file storage in the cloud

6.3.1 Upload content to the cloud

6.3.2 Download content from the cloud

6.3.3 Synchronize files between devices using the cloud

6.4 Compare online and local apps

6.4.1 Evaluate Software as a Service (SaaS) concepts

6.5 Differentiate between types of online apps

6.5.1 Identify online office/productivity apps

6.5.2 Identify cloud storage providers

6.5.3 Identify database-driven customer relationship management (CRM) apps

6.5.4 Recognize the purpose of Learning Management Systems (LMS)

6.5.5 Identify the use of discussion boards

7. Security

7.1 Understand credential management best practices

7.1.1 Identify the security implications of user names and passwords

7.1.2 Create secure passwords

7.1.3 Differentiate between secure and unsecure password storage solutions

7.1.4 Set or change user account permissions, passwords, and pictures

7.1.5 Identify the purpose of logging off from or locking a computer

7.1.6 Lock your computer

7.2 Recognize basic computer security threats

7.2.1 Define viruses, malware, Trojan programs, phishing, and social engineering

7.2.2 Recognize the effect of viruses, malware, Trojan programs, phishing, and social engineering

7.3   **Recognize surveillance software concepts**

7.3.1   Classify surveillance software

7.3.2   Recognize the threat of surveillance software

7.4   **Understand network and browser security**

7.4.1   Recognize the security capabilities and limitations of wired and wireless network connections

7.4.2   Identify security risks and measures when using a public computer

7.4.3   Identify secure network connections

7.4.4   Assess the importance of clearing Internet browsing history

7.4.5   Delete temporary files, cookies, saved passwords, and web form information

7.4.6   Log out from online accounts and computer user accounts

7.5   **Understand antivirus software concepts**

7.5.1   Recognize the purpose and importance of antivirus software

7.5.2   Identify antivirus software

7.5.3   Maintain and update antivirus software

7.6   **Understand firewall concepts**

7.6.1   Identify the purpose of a firewall

7.6.2   Identify hardware and software firewalls

7.6.3   Recall security options managed by firewalls

7.6.4   Identify the effects of firewall configurations

7.6.5   Enable or disable a firewall

7.7   **Identify e-commerce security risks**

7.7.1   Recognize the need for e-commerce security

7.7.2   Identify secure browser connection (HTTPS)

7.8   **Understand VPN connections**

7.8.1   Recall the definition of a Virtual Private Network (VPN) connection

7.8.2   Recognize the purpose of VPN connections

IC3 Key Applications - Global Standard 5

Objective Domains

1. Common Features

1.1 **Choose appropriate keyboard shortcuts, such as cut, copy, paste, select all, print, save, undo, and redo**

1.2 **Identify content types**
- 1.2.1 Identify and distinguish between plain text and HTML content
- 1.2.2 Format the content of an outgoing email message as plain text, rich text, or HTML

1.3 **Use spelling check tools**
- 1.3.1 Check spelling and grammar

1.4 **Use Comments tool**
- 1.4.1 Insert comments in a document or worksheet cell
- 1.4.2 Move between comments in a document, worksheet, or presentation

1.5 **Use the Find and Replace tools in Microsoft Office applications**

1.6 **Select content**
- 1.6.1 Select content in a document, on a slide, or in a worksheet cell

1.7 **Use the graphical user interface (GUI) to undo or redo actions**

1.8 **Move content by using the mouse**
- 1.8.1 Drag content to another location within a document or worksheet
- 1.8.2 Drag content between documents or worksheets

1.9 **Characterize read-only view concepts**
- 1.9.1 Identify characteristics of a read-only file
- 1.9.2 Use Mark as Final

1.10 **Understand Protected View concepts**
- 1.10.1 Identify circumstances in which a file opens in protected mode
- 1.10.2 Identify Protected View restrictions

1.11 **Change the magnification level**
- 1.11.1 Change the magnification level by using the zoom slider
- 1.11.2 Set the magnification level to a specific percentage

2. Work in Documents

2.1 **Format text**
- 2.1.1 Change font properties
- 2.1.2 Use Format Painter

2.2 **Configure page layout options**
- 2.2.1 Change page orientation
- 2.2.2 Change page size
- 2.2.3 Change page margins

2.2.4   Format text in columns

2.2.5   Insert page numbers

2.2.6   Insert headers and footers

2.3   Modify existing styles

2.4   Create files

2.4.1   Create a document

2.4.2   Save a document in the current and legacy document file types

2.4.3   Save a document as a text file or PDF file

2.4.4   Save a document as a template

2.5   Configure paragraph layout options

2.5.1   Change paragraph alignment

2.5.2   Configure indents

2.5.3   Set tab stops

2.5.4   Change line and paragraph spacing

2.6   Prepare a document for printing

2.6.1   Preview a document as it will be printed

2.7   Configure print options

2.7.1   Print all or specific pages of a document

2.7.2   Print a document single-sided or double-sided

2.7.3   Print multiple pages per sheet

2.7.4   Change the paper size

2.8   Use Track Changes

2.8.1   Turn on and off change tracking

2.8.2   Review tracked changes

2.8.3   Accept or reject tracked changes

2.9   Create tables in documents

2.9.1   Create a table with a specific number of rows and columns

2.9.2   Format existing text as a table

2.10   Identify Microsoft Word-compatible file types

2.10.1   Recall file types that can be opened and edited in Word

3.   Work in Spreadsheets

3.1   Identify common spreadsheet elements

3.1.1   Identify workbooks

3.1.2   Identify worksheets

3.1.3   Identify worksheet columns

3.1.4   Identify worksheet rows

3.1.5   Identify worksheet cells

3.1.6   Identify data ranges

3.1.7   Identify navigation tools and features

3.2   Manage rows and columns

3.2.1   Copy and paste rows and columns

3.2.2   Delete rows and columns

3.2.3   Insert new, copied, and cut rows and columns

3.3   Set row height and column width

3.4   Sort and filter worksheet data

3.4.1   Sort data in a data range

3.4.2   Filter data in a data range

3.5   Understand functions, formulas, and operators

3.5.1   Use functions

3.5.2   Use operators

3.5.3   Create formulas

3.5.4   Recognize formula syntax

3.5.5   Reference cells and data ranges in formula syntax

3.6   Enter worksheet data

3.7   Work with charts in Excel

3.7.1   Identify chart elements

3.7.2   Create a chart

3.7.3   Interpret the information conveyed by a chart

3.8   Work with Excel tables

3.8.1   Create a table

3.8.2   Format data as a table

3.8.3   Apply table styles

3.9   Manipulate cells and cell content

3.9.1   Merge multiple cells

3.9.2   Unmerge cells

3.9.3   Use Paste options

3.10   Format worksheet cells and text

3.10.1   Change the font properties in cells

3.10.2   Change the alignment of text within cells

3.10.3   Apply a Number Format to cell content

3.10.4   Format cell borders

3.10.5   Apply cell fill colors

3.11   Identify Microsoft Excel-compatible file types

3.11.1   Recall file types that can be opened and edited in Excel

3.12   Use workbook templates

3.12.1   Create a workbook based on a template

3.13   Create a formula to reference data on another worksheet

4.   Understand basic database concepts

4.1   Recognize data

4.2   Characterize the contribution of databases to websites

4.3   Identify relational database elements

4.3.1   Identify Fields
4.3.2   Identify Records
4.3.3   Identify Tables
4.3.4   Identify Database
4.3.5   Recognize that tables can have relationships

4.4   Define metadata
4.4.1   Identify metadata
4.4.2   Recall the purpose of metadata

5.   Work in Presentations

5.1   Identify Microsoft PowerPoint-compatible file types
5.1.1   Recall file types that can be opened and edited in PowerPoint
5.1.2   Recall methods of distributing content from PowerPoint

5.2   Use audio and video output devices
5.2.1   Recall options for displaying a presentation on multiple monitors
5.2.2   Identify connection methods that support video content
5.2.3   Identify connection methods that support audio content

5.3   Display presentations
5.3.1   Switch among presentation views
5.3.2   Identify methods of presenting a slide show on one or multiple monitors

5.4   Configure animations and slide transitions
5.4.1   Animate slide content
5.4.2   Configure animation effects
5.4.3   Apply transitions to slides

5.5   Create and manage slides
5.5.1   Manage media content
5.5.2   Insert images on slides
5.5.3   Format images on slides
5.5.4   Insert audio files on slides
5.5.5   Configure the playback of audio files
5.5.6   Insert video files on slides
5.5.7   Configure the playback of video files

5.6   Manage slide layout and appearance
5.6.1   Apply presentation templates
5.6.2   Change a slide to a different layout

5.7   Manage presentation structure
5.7.1   Create a presentation
5.7.2   Add slides to a presentation
5.7.3   Delete slides from a presentation
5.7.4   Move slides within a presentation

6.   Understand application uses and platforms

6.1   Obtain and install desktop and mobile applications

6.2   Recognize app genres
6.2.1   Identify productivity apps
6.2.2   Identify reference apps
6.2.3   Identify content management apps
6.2.4   Identify content creation apps
6.2.5   Identify social media apps
6.2.6   Identify music apps
6.2.7   Identify health apps

6.3   Understand strengths and limits of apps and applications
6.3.1   Distinguish between apps and applications
6.3.2   Identify strengths and limitations of apps
6.3.3   Identify strengths and limitations of applications

7.   Graphic Modification

7.1   Insert images into an office document
7.1.1   Insert an image from the computer
7.1.2   Insert an image from an online source
7.1.3   Set the image properties

7.2   Crop images within an office document
7.2.1   Crop an image freehand
7.2.2   Crop an image to a preset shape
7.2.3   Crop an image to a preset aspect ratio

IC3 Living Online - Global Standard 5

Objective Domains

1. Internet Concepts

1.1 Identify Internet concepts

- 1.1.1 Identify Internet infrastructure
- 1.1.2 Locate and validate Internet content
- 1.1.3 Identify browser concepts
- 1.1.4 Identify intellectual property (IP) and copyright concepts
- 1.1.5 Identify licensing concepts
- 1.1.6 Identify censorship concepts
- 1.1.7 Identify plagiarism concepts

2. Common Functionality

2.1 Demonstrate website navigation techniques

- 2.1.1 Navigate website content by clicking and double-clicking
- 2.1.2 Display hidden information by mousing over website content
- 2.1.3 Drag and drop files onto a website page

3. Email clients

3.1 Recall email clients and services

- 3.1.1 Recall email service providers
- 3.1.2 Recall desktop email applications
- 3.1.3 Recall web email services

3.2 Understand message concepts

- 3.2.1 Identify the components of a message header
- 3.2.2 Distinguish among message response options (reply, reply all, forward)
- 3.2.3 Distinguish between courtesy copy options (cc, bcc)
- 3.2.4 Determine the effects of message and mailbox size limits
- 3.2.5 Identify the purpose of an email signature

3.3 Understand email management concepts

- 3.3.1 Identify types of junk mail
- 3.3.2 Locate quarantined messages
- 3.3.3 Configure message archival settings
- 3.3.4 Locate deleted messages
- 3.3.5 Restore deleted messages
- 3.3.6 Empty the Deleted Items folder
- 3.3.7 Recall reasons for creating email folders
- 3.3.8 Create a folder
- 3.3.9 Move a message to a folder

IC3 Living Online

3.4 Understand email attachment concepts

3.4.1 Recognize email attachments

3.4.2 Attach files to an email message

3.4.3 Save an email attachment from a message

3.5 Understand contact management concepts

3.5.1 Create a list of contacts

3.5.2 Create a contact record

4. Calendaring

4.1 Manage appointments and events in online calendar applications

4.1.1 Create one-time and recurring events, appointments, and meetings

4.1.2 Invite people to an event or meeting

4.1.3 Recognize necessary and optional elements of an event or meeting invitation

4.2 Share online calendars

4.2.1 Request access to someone's calendar

4.2.2 Share your calendarKnow how to view multiple calendars

4.3 Manage multiple calendars using online calendar applications

4.3.1 Display multiple calendars side by side

4.3.2 Overlay multiple calendars

4.3.3 Change the color assigned to a calendar

4.4 Understand online calendar subscriptions

4.4.1 Identify common types of subscription calendars

4.4.2 Subscribe to an Internet calendar

5. Social Media

5.1 Understand social media concepts

5.1.1 Identify the purposes of social networks

5.1.2 Identify the effect of following a person or group on a social network

5.1.3 Identify the effects of posting information online

5.2 Understand social network concepts

5.2.1 Distinguish among school, business, and personal social networking

5.2.2 Distinguish between open and closed social networks

5.3 Recall information-posting platform concepts

5.3.1 Recall the definition and purpose of blogs

5.3.2 Recall the definition and purpose of wikis

5.3.3 Recall the definition and purpose of forums

5.3.4 Recognize means of communication on blogs, wikis, and forums

5.4 Understand cyber bullying concepts

5.4.1 Recall the definition of cyber bullying

5.4.2 Recognize actions that are classified as cyber bullying

5.4.3 Identify the outcome of cyber bullying

6. Communications

6.1 Understand communication options

6.1.1 Distinguish between communication methods

6.1.2 Recommend the most appropriate communication method for a given circumstance

6.2 Understand SMS text messaging concepts

6.2.1 Identify appropriate uses of text messaging as a business communication tool

6.3 Understand chat platform concepts

6.3.1 Identify available chat platforms

6.3.2 Identify appropriate uses of chat platforms in a business setting

6.4 Identify online collaboration tools

6.4.1 Recall online collaboration tools for remote learners and workers

6.4.2 Identify online file storage systems for remote workers

6.4.3 Identify online conferencing platforms

6.4.4 Recall features of online conferencing platforms

7. Online Conferencing

7.1 Understand online conferencing concepts

7.1.1 Distinguish between available online conferencing platforms

7.1.2 Recognize common capabilities of online conferencing platforms (voice, video, screen sharing, hosted presentations)

8. Streaming

8.1 Understand content streaming concepts

8.1.1 Recall the definition of streaming

8.1.2 Identify instances of audio streaming, video streaming, and live streaming

8.1.3 Distinguish between streaming and downloading

9. Digital Citizenship

9.1 Understand online communication methods

9.1.1 Recognize the speed and obtrusiveness of available online communication methods

9.1.2 Identify the best online communication method to use in a specific situation

9.2 Understand physical wellness aspects of living online

9.2.1 Identify ergonomic best practices for maintaining physical health while working on a computer or device

9.2.2 Identify the effects of screen time on physical health

9.3 Manage online identities

9.3.1 Modify information stored in an online profile

9.4 Understand personal and professional identity concepts

9.4.1 Distinguish between personal and professional online identities

9.4.2 Recognize elements of a person's online identity

9.4.3 Analyze the positive and negative effects of online activities