Computer Principles/Unix

1. What was the name of the first internet, which was developed in the late 1960s?
   A. World Wide Web (WWW)
   B. ARPANET
   C. Internet Explorer
   D. Netscape Navigator

2. What unique numerical labels are assigned to devices on a network to identify them?
   A. Routers
   B. Clients
   C. IP Addresses
   D. ISPs

3. What is the primary purpose of the "cd" command in Unix?
   A. Copy files and directories
   B. Delete files and directories
   C. Change the working directory
   D. List the contents of a directory
   E. View file permissions

4. Which command is commonly used to create a new directory in Unix?
   A. ls
   B. cat
   C. touch
   D. mkdir
   E. cp

Operating Systems

5. What is the primary difference between hardware and software?
   A. Hardware is the physical component of a computer, while software is the set of instructions that run on the hardware.
   B. Software is tangible and can be physically touched, while hardware consists of only code.
   C. Hardware consists of applications, while software includes devices like the CPU and RAM.

6. What is the i6 server that students have access to?
   A. A cloud-based Windows server for hosting websites
   B. A Linux-based server where students have directories for development work
   C. A MacOS development environment pre-installed on all student computers
   D. A virtual machine for running Python scripts only

7. The only way to access i6 is through Cyberduck.
   A. True
   B. False

8. Which of the following best describes the difference between a Command Line Interface (CLI) and a Graphical User Interface (GUI)?
   A. CLI is only used by programmers, while GUI is for non-technical users.
   B. GUI is faster than CLI for all tasks.
   C. CLI is text-based and requires typing commands, while GUI is visual and uses icons and menus.
   D. CLI is a type of hardware, while GUI is software.

9. What is the purpose of SSH (Secure Shell)?
   A. To compress and archive files
   B. To format and partition a hard drive
   C. To switch between different users on a Unix system
   D. To securely access a remote server over a network

HTML

10. What does HTML stand for?
    A. Hyper Transfer Text Language
    B. High Tech Markup Language
    C. Hyperlink and Text Markup Language
    D. Hypertext Markup Language

11. Which of the following best describes a markup language?
    A. A language used to style the visual appearance of web pages.
    B. A programming language used to write server-side code.
    C. A language that uses tags to structure and format content in a document.

12. Which of the following best describes a block-level element?
    A. It is used to style text without affecting the document's layout.
    B. It is always displayed in a new line and takes up the full width available.
    C. It does not start on a new line and only takes up as much width as necessary.

13. Select all inline elements
    A. a
    B. br
    C. em
    D. p
    E. img

14. In which scenario would it be most appropriate to use a <span> tag?
    A. To create a container for an entire section of a webpage.
    B. To style a small portion of text within a paragraph, such as making a single word bold.
    C. To define the main content area of a webpage.
    D. To create a navigation bar.

15. Which type of link is recommended for connecting internal pages within the same website?
    A. Absolute link
    B. Relative link
    C. External link
    D. Dynamic link

CSS

16. What is the primary purpose of CSS in web development?
    A. To create dynamic server-side scripts
    B. To define the structure of a web page
    C. To manage the layout and presentation of web content
    D. To process user input in forms

17. What is the purpose of the CSS cascade?
    A. To determine the order of properties in a CSS file.
    B. To resolve conflicts between conflicting CSS rules.
    C. To control the flow of text within a webpage.

18. Which of the following selectors has the highest specificity?
    A. Element selectors
    B. ID selectors
    C. Class selectors

19. What CSS property is used to control the spacing between the content and the border of an element?
    A. padding
    B. margin
    C. space-between

20. What does the box-sizing: border-box; CSS property do?
    A. Includes the element's padding and border in its total width and height.
    B. Applies a border around the element's content.
    C. Sets the display style of the element to a block-level element.

21. Which of the following properties is used to create flexible layouts in CSS?
    A. flex-direction
    B. position
    C. display

22. Which property defines how a flex container's children are positioned along the main axis?
    A. align-items
    B. justify-content
    C. flex-grow
    D. flex-wrap

23. In the HSL color model used in CSS, what does the 'H' stand for?
    A. Height
    B. Hue
    C. Highlight
    D. Hexadecimal

24. In CSS, what does the pseudo-class ":hover" represent?
    A. Active links
    B. Visited links
    C. Links on focus
    D. Elements when a mouse pointer hovers over them

25. Which selector applies styles to every a inside of nav?
    A. nav, a { color: red; }
    B. nav > a { color: red; }
    C. a nav { color: red; }
    D. nav a { color: red; }

26. When using percentages (%) in CSS, what does the percentage value depend on?
    A. The element's computed width and height
    B. The size of the parent element, but only if the parent has an explicit size for that property
    C. The size of the nearest positioned ancestor
    D. The browser's default font size

27. If the base font size of a document is 16px, what is the computed font size of .child in pixels? (.parent is the parent of .child).

    ```
    .parent { font-size: 20px; }
    .child { font-size: 2em; }
    ```

    A. 16px
    B. 20px
    C. 32px
    D. 40px
    E. Cannot be determined

Web Graphics

28. What is the primary difference between raster and vector graphics?
    A. Raster graphics are resolution-independent, while vector graphics have fixed resolutions.
    B. Raster graphics are composed of pixels, while vector graphics are made up of mathematical shapes and paths.
    C. Raster graphics are suitable for scaling without loss of quality, while vector graphics are not.
    D. Raster graphics are more suitable for printing, while vector graphics are better for digital display.

29. Which graphic format is most appropriate for an image of a sunset with varying shades of color?
    A. BMP
    B. GIF
    C. Vector
    D. JPEG

30. Which of the following file formats is commonly used for vector graphics?
    A. JPEG
    B. PNG
    C. SVG
    D. GIF
    E. None of the above

31. Which color mode is used for professional printing?
    A. RGB
    B. CMYK
    C. Grayscale
    D. Duotone

32. Which of the following is true about the RGB color mode?
    A. It is used for print media.
    B. It is an additive color model.
    C. The values for RGB are a number between 0 and 100.

33. Which of the following is true about the srcset attribute in HTML?
    A. It is used to provide alternative text for images

B. It allows you to specify multiple image sources for different screen resolutions
C. It is used to define alternate image formats

34. What is the purpose of the <defs> element in SVG?
    A. It defines the overall size of the SVG canvas.
    B. It stores reusable elements like gradients, patterns, and symbols.
    C. It applies default styles to all elements inside an SVG.
    D. It automatically renders any shape defined within it.

In Reference to Attached Code

35. What is the "parent" element of the <ol> element?
    A. <main>
    B. <img>
    C. <div id="container">
    D. <section class="col1">
    E. <body>

36. How will the ordered list and caption be positioned in relation to image on the website?
    A. To the right side of the image in a three column layout
    B. To the left side of the image in a three column layout
    C. They will be positioned beneath the image
    D. They will be positioned above the image

37. Which of the following best describes the size of the web page's image?
    A. The image is 100% of the width of the browser window
    B. The image is 300px wide
    C. The image is 345.6px wide
    D. The image is 720px wide

38. List items on the website will be...
    A. Numbered
    B. Lettered
    C. Bullet-pointed

39. How will the two paragraphs in <section class="col2"> be positioned in relation to one another?

A. Side by side
B. One on top of the other

40. How does the size of the first-level heading compare to the size of the footer text?
    A. They're the same size
    B. The heading text is 2x larger than the footer text
    C. The heading text is 1.4x larger than the footer text
    D. The heading text is 130% larger than the footer text

41. What kind(s) of styles are being applied to this page?
    A. An external style sheet only
    B. An internal style sheet only
    C. An external style sheet and internal style sheet
    D. An external style sheet and inline styles
    E. None of the above

42. From the code, it can be inferred that the stylesheet is located where?
    A. In a parent directory called "styles"
    B. In the same directory as this HTML document
    C. In a separate subdirectory

43. How will a visitor be able to distinguish the page's hyperlink text from paragraph text?
    A. It will be underlined
    B. It will be blue and underlined
    C. It will be blue
    D. Hyperlink text has not been distinguished

44. The first level heading on the page will display in the font, Arial.
    A. True
    B. False

45. What will the color of paragraph text be?
    A. black
    B. rgb(0, 0, 0)
    C. #1b1b1b
    D. A and B
    E. None of the above

```
<!DOCTYPE html>                                          index.html
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <title>Submarine Communications Cables</title>
    <link rel="stylesheet" href="styles.css" />
    <style>

      section {color: rgb(0,0,0);}

      #title {font-family: 'Courier New', Courier, monospace;}

    </style>
  </head>

  <body>
    <div id="container">
      <h1 id="title">Submarine Communications Cables</h1>

      <main>
        <section class="col1">
          <img src="images/cable-illustration.svg" alt="submarine cable
cross-section" width="300" height="230"/>

          <p id="caption" class="illustration">
            A cross section of the shore-end of a modern submarine
            communications cable.
          </p>

          <ol class="illustration">
            <li>Polyethylene</li>
            <li>Mylar tape</li>
            <li>Stranded steel wires</li>
            <li>Aluminium water barrier</li>
            <li>Polycarbonate</li>
            <li>Copper or aluminium tube</li>
            <li>Petroleum jelly</li>
            <li>Optical fibers</li>
          </ol>
        </section>

        <section class="col2">
          <p>
            A submarine communications cable is a cable laid on the sea bed
            between land-based stations to carry telecommunication signals
            across stretches of ocean. The first submarine communications
            cables—laid in the 1850s—carried telegraphy traffic. Subsequent
            generations of cables carried telephone traffic, then data
            communications traffic. Modern cables use optical fiber technology
            to carry digital data, which includes telephone, Internet, and
            private data traffic.
          </p>
```

```
      <p>
        Modern cables are typically about 25 millimeters (0.98 in) in
        diameter and weigh around 1.4 kilograms per meter (0.4 lb/ft) for
        the deep-sea sections, which comprise the majority of the run.
        Larger and heavier cables are used for shallow-water sections near
        shore. As of 2010, submarine cables link all the world's continents
        except Antarctica.
      </p>
    </section>
  </main>

  <footer>
    <p class="credit">
      <a href="https://www.nyu.edu/" style="text-decoration: none">Introduction
to Web Design</a>
    </p>
  </footer>
  </div>
  </body>
</html>
```

```
body {                                          styles.css
  color: #1b1b1b;                    h1, p, ol {
  font-family: Arial, sans-serif;      line-height: 130%;
}                                    }

#container {                         h1 {
  width: 720px;                        font-size: 1.4em;
  margin: auto;                      }
}
                                     img {
main {                                 border: 1px solid black;
  display: flex;                       width: 100%;
}                                      height: auto;
                                     }
.col1, .col2 {
  width: 48%;                        .illustration, .credit {
  margin-right: 4%;                    font-size: 0.7em;
}                                    }

.col2 {                              .credit {
  border-top: 1px solid black;         text-align: center;
  margin: 0;                           padding-top: 10px;
  padding: 0;                        }
}

footer {
  width: 100%;
  border-top: 1px solid black;
}
```