



University of Vavuniya

First Examination in Information Technology - 2020

First Semester April/May 2022

IT1113 Fundamentals of Information Technology (Theory)

Answer Four Questions Only

Time Allowed: Two Hours

1. (a) The unique capabilities and characteristics of a computer have made it very popular among its various users including engineers, managers, accountants, teachers, and students.
Briefly describe five characteristics and capabilities of a modern digital computer. [10%]
- (b) The history of computer development is often discussed in terms of different generation of computers.
Describe important characteristics of a computer system for each of the five computer generations. [15%]
- (c) Computers can be classified into three categories based on operating principles.
Briefly describe each of these categories. [15%]
- (d) Draw a block diagram of a computer system and briefly describe the functions performed by each of the units of the computer system. [25%]

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University of Vavuniya

First Examination in Information Technology - 2020

First Semester - April/May 2022

IT1144 Fundamentals of Web Programming (Theory)

Answer Four Questions only

Time Allowed : Two hours

1. (a) Define the term computer network. [15%]
(b) List five basic features of Hypertext Transfer Protocol(HTTP). [15%]
(c) Briefly explain how the browsers are interacts with the servers by using Uniform Resource Locator(URL). [20%]
(d) Differentiate Static web pages and Dynamic web pages. [20%]
(e) Compare each of the following in the context of web development.
 - i. The internet and WWW.
 - ii. Clients and Servers.
 - iii. Client-side scripting and Server-side scripting. [30%]
2. (a) Define the term web security. [10%]
(b) Describe *five* advantages of File Transfer protocol(FTP). [10%]
(c) Describe how does Google search engine works. [20%]
(d) Discuss the purpose of web hosting and the factors that helps to choose the web hosting company. [20%]

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(e) Consider the following scenario.

"Ajay is a student of University of Vavuniya. He got an email from the "Student Portal" prompting him to confirm payment for a medical procedure immediately. He clicks on the link and is taken to a site that looks much like the Central Authentication Service (CAS) login page except that the form didn't seem to behave the same as usual when entering his *username* and *password*. He submits his login details and is then redirected to a strange page. He forgets about the message later."

Briefly explain the type of security attack involved in the above scenario. [20%]

(f) Discuss the good practices that can be followed to protect a computer from security threats. [20%]

3. (a) Define the term HyperText Markup Language (HTML). [10%]

(b) Differentiate *HTML elements* and *tags*. [15%]

(c) Briefly describe the basic structure of an HTML document. [20%]

(d) Write a code snippet to insert an image "Lily.png" into a web page with the *width* of 100px, *height* of 100px and alternate text "Flower". [20%]

(e) State the significance of using *Meta tags* in HTML5. [20%]

(f) Justify the statement "HTML is not a Programming language". [15%]

4. (a) Describe *five* benefits of using Cascading Style Sheet (CSS) in web development. [15%]

(b) State what is meant by *CSS selectors*. [20%]

(c) Define the precedent order of stylesheets in which CSS rules cascade when more than one styles are applied for the same HTML element. [15%]

(d) Write CSS code block to accomplish the following tasks:

i. Remove the underline of a link.

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- ii. Set the background colour Unordered list to "Red". [20%]
- (e) Briefly explain any three of the following types of CSS by using suitable examples:
- i. External stylesheet
 - ii. Embedded style sheet
 - iii. Inline style sheet
 - iv. Import style sheet [30%]
5. (a) Define what is meant by Responsive web design. [15%]
- (b) Briefly explain how does Bootstrap helps to develop the responsive website. [15%]
- (c) State the significant differences between User Experience(UX) and User Interface(UI). [20%]
- (d) Briefly explain how Norman's design principles used for transforming difficult tasks into simple ones. [20%]
- (e) Briefly describe three major components of a responsive web design. [30%]

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