

Q1

i. State whether each of the following statements is true or false. If the statement is false, explain why. [2 marks]

- a) Cascading Style Sheets 3 (CSS3) is used to specify the presentation, or styling, of elements on a web page (e.g., fonts, spacing, sizes, colors, positioning).

true

- b) Ensuring a consistent look and feel on client-side browsers is one of the great challenges of developing web-based applications.

true

- c) An HTTP request typically posts (or sends) data to a server for updating stored data on the server.

False, POST requests do not necessarily have to be used for updating stored data on a server.

- d) Client-side scripts often can access the server's file-directory structure.

False, client-side scripts should not have access to the server's file-directory structure for security reasons.

ii. Fill in the blanks in each of the following statements: [3 marks]

- a) IPv6 is the next-generation Internet Protocol that features built-in security and a new addressing scheme, significantly expanding the number of addresses available.

- b) HTML documents normally contain hyperlinks, which, when clicked, load a specified web document.

- c) A URL contains information that directs a browser to the resource that the user wishes to access; Web servers make such resources available to web clients.

- d) The two most common HTTP request types are GET and POST.

- e) Web-based applications are multitier applications. The bottom tier (also called the data tier or the information tier) maintains the application's data and typically stores data in a relational database management system. The middle tier implements business logic, controller logic and presentation logic to control interactions between the application's clients and its data. The top tier, or client tier, is the application's user interface, which gathers input and displays output.

- f) Android, the fastest growing mobile and smartphone operating system, is based on the Linux kernel and Java.

iii. Describe the difference between client-side programming and server-side programming. [5 marks]

Client-side programming builds web pages and applications used to run on the client, such as a web browser. Server-side programming builds applications that responds to requests from client-side web browsers.