Question 1

(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, a post request sends data to a server for updating stored data on the server, while a get request is typically used for search queries (not data updating).**

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

**False, this applies to server-side scripts not client-side scripts.**

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

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

**IPv6**

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

**hyperlinks**

c) A \_\_\_\_\_\_\_\_\_\_ contains information that directs a browser to the resource that the user wishes to access; \_\_\_\_\_\_\_\_\_\_ make such resources available to web clients.

**URL; Web Servers**

d) The two most common HTTP request types are \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_.

**get ; post**

e) Web-based applications are multitier applications. The \_\_\_\_\_\_\_\_\_\_ (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 \_\_\_\_\_\_\_\_\_\_ implements business logic, controller logic and presentation logic to control interactions between the application’s clients and its data. The \_\_\_\_\_\_\_\_\_\_, or client tier, is the application’s user interface, which gathers input and displays output.

**Bottom tier; middle tier; top tier**

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

**Android**

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

**Client-side programming is used to create web pages and web applications that are run on the client side (browser of a user[s]) while server-side programming is used to create web applications that are used to respond to client requests.**