Task D

Q1

3 Hardware:

Computer: This is the device you use to do things on the internet (gaming, banking, emails). Could be a desktop, laptop phone etc.

Modem: These allow computers to be connected to the internet.

Network card: This allows the computer to connect to the modem.

3 Software:

Operating System: This is the program that provides you with a GUI and allows you to use the other programs on your computer.

Browser: This is the program that receives and presents information that it gets from the internet.

BIOS or Basic Input/Output System is the program that the computers microprocessor uses to load the operation system from the hard drive.

Q2

TCP/IP or Transmission Control Protocol/Internet Protocol is the basic communication language of the internet. TCP disassembles and reassembles data for transmission over the internet. IP is responsible for sending and receiving the packets. An IPv4 address uses four numbers between 0 and 255 to assign an address to a computer. IPv6 uses 8 hexadecimal numbers between 0000 and FFFF, it was introduced because there wasn’t enough IPv4 addresses.

HTTP or Hyper Text Transfer Protocol is used to communicate between a server and a browser.

SMTP or Simple Mail Transfer Protocol is used to send emails.

Q3

Internet Service Providers are the company that sell you internet access. Eg Three

Domain name registrars are the company that sell you a domain name, eg godaddy.com

Web hosting services are the company that sell you bandwidth and storage for the files you use on your site.

Q4

4 Web Functionality

Games: You can play interactive games on the internet. Flash games, MMOs etc.

Shopping Cart: allows you to add various items to a cart and purchase them

Internet Banking: Allows you to manage your bank account online. You can transfer money, pay bills etc.

Email link: allows you to open your email client with the address you wanted to email already selected.

Q5 HTML: HTML uses tags enclosed in angular brackets, often in pairs like <head> and </head> which are read by a browser to render them into web pages. HTML is used to set the look of data.

XML: XML is similar to HTML and uses the same bracket system, however it is used to set what the data is, not how it looks.

Q6 Explain the use and functionality of:

Web runtime environments: A web runtime environment is used to run code on a website, for example JavaScript. It can be used to modify the CSS and add client-side behaviour to HTML pages.

Web application programming languages: Examples JavaScript, PHP , Python, these language are used to add functionality and interactivity to websites, for example, databases.

Databases including SQL: SQL or Structured Query Language is used for managing data held in a database. A database is a collection of information which is ordered to allow easy access and enable easy modification.

PHP: Is a server side scripting language designed for web development, it is used to allow developers to generate dynamically generated pages quickly.

Q7

Identify one typical stack combination that can be used for web development.

LAMP

Linux

Apache

MySQL

PHP