

The internet and its uses – 2020 O Level 2210

1. **June/2020//Paper_11/No.7**

Hans has a website selling comic books. Customers can create an account to buy the comic books.

Customers enter a username and password to log in to their account.

(a) Customers may worry about keylogging software being used to gain unauthorised access to their account.

(i) Describe how keylogging software can be used to gain unauthorised access to a customer's account.

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..... [4]

(ii) Identify a feature that Hans can add to the website to limit the threat of keylogging software.

..... [1]

(b) Hans makes sure data transmission for his website is secure.

(i) State how customers can check that the personal details they enter into the website will be transmitted securely.

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..... [1]

(ii) Explain how a customer's browser checks that the website is secure.

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..... [4]

2. June/2020//Paper_12/No.5

Meena uses a browser to research information for her business.

(a) Give **three** functions of a browser.

- 1
- 2
- 3 [3]

(b) Meena buys products for her business using the Internet.

The Transport Layer Security (TLS) protocol is used for transferring data when she buys products.

One layer of the TLS protocol is the handshake layer.

(i) Describe the purpose of the handshake layer.

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- [2]

(ii) Identify the other layer of the TLS protocol.

- [1]

(iii) Identify another protocol that can be used to transfer data securely.

- [1]

(c) Meena visits a website to buy products for her business.

The browser uses a small file to store the details of the products she views. This allows the website to display advertisements for other products she may like.

The small file also stores her log-in details.

Give the name of this type of file.

- [1]

3. June/2020//Paper_12/No.10

Uma is concerned about risks that she may encounter when using the Internet.

Two of the risks she is concerned about are phishing and pharming.

(a) Give **one** similarity and **two** differences between phishing and pharming.

Similarity

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Difference 1

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Difference 2

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[3]

(b) Identify **two** other risks that Uma could encounter when using the Internet.

Risk 1

Risk 2

[2]

(c) Uma uses a firewall to secure the data on her computer.

(i) Uma tells her friend that a firewall can only be software-based.

Tick (✓) to show whether Uma is **Correct** or **Incorrect**.

Correct

Incorrect

[1]

(ii) Describe how the firewall helps to keep Uma's data secure.

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[4]

4. Nov/2020//Paper_12/No.12,d,e

Tina is creating a website for charity events. She uses HTML to create the website.

(a) State what is meant by HTML.

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 [1]

(b) She uses the hexadecimal colour code #43B7F0 as the background colour for her website.

(i) State whether background colour is an example of **structure** or **presentation**, in the website.

..... [1]

(ii) The hexadecimal colour code #43B7F0 is stored in three **8-bit** registers.

Give the **8-bit binary** values for each part of the hexadecimal code.

43									
B7									
F0									

[6]

(c) Tina uses a microphone to record a welcome message for her website.

(i) State whether the microphone is an **input** or **output** device.

..... [1]

- (ii) She wants to compress the recording to make sure that the file is as small as possible for the website.

Identify which type of compression she should use and describe how this would compress the file for the website.

Type of compression

Description

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..... [4]

- (iii) Give **two** benefits of compressing the file for the website.

Benefit 1

Benefit 2

[2]

(e) Tina is concerned about security threats to her web server.

(i) Identify **three** security threats to her web server that Tina might be concerned about.

- 1
 - 2
 - 3
- [3]

(ii) Tina installs a proxy server to help protect her website from security threats.

Describe how the proxy server will help protect the website.

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[4]