

Comp Sci – Internet Technologies - ANSWERS

| Question | Answer | Marks |
|----------|---|-------|
| 5 | HTML – HyperText Markup Language / language used to create web pages http – hypertext transfer protocol / protocol used by web browsers https – hypertext transfer protocol secure / secure protocol used by web browsers | 3 |

4 1 mark per correct word

1 protocol

2 web server name

3 file name



accept these three items in any order

HTML tags/text

firewall

proxy server

[6]

2 (a) **media access control**

[1]

(b) Any **three** from:

- hardware/physical address
- unique address/number associated (with network card in) a device/computer
- usually 48/64 bits (12/16 hex digits)
- first 6/8 digits = manufacturer code/ID of device (NIC)
- last 6/8 digits = serial number of device (NIC)

[3]

6 (a) Any **one** from:

- protocol ends in “s”
- use of https

[1]

(b) Any **three** from:

- requests web server to identify itself/view the (SSL) certificate
- receives a copy of the (SSL) certificate, sent from the webserver
- checks if SSL certificate is authentic/trustworthy
- sends signal back to webserver that the certificate is authentic/trustworthy
- starts to transmit data once connection is established as secure
- if website is not secure browser will display an open padlock/warning message

[3]

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11 1 mark for each correct point

- Presentation is used to format colour/style
- Structure is used to create layout
- In a HTML document structure and presentation are often kept separate
- By keeping the presentation separate it is easier to update colour/font
- Presentation is often stored in a file called a CSS ...
- ... the CSS is then linked to the HTML document to implement the presentation requirements
- (Mark-up) tags are used to define the structure of the document ...
- ... presentation and formatting can also be included within the tags

[4]

| Question | Answer | Marks |
|----------|--|-------|
| 7 | <p>1 mark for correct line till 5 marks given.</p> | 5 |

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| Question | Answer | Marks |
|----------|---|-------|
| 11 | <p>Seven from:</p> <p>Requested a web browser is used user enters the URL / web address (into the address bar) // clicks a link containing the web address // clicks an element of the webpage the URL / web address specifies the protocol protocols used are Hyper Text Transfer Protocol (HTTP) / Hyper Text Transfer Protocol Secure (HTTPS)</p> <p>Sent the URL / web address contains the domain name the Internet Service Provider (ISP) looks up the IP address of the company the domain name is used to look up the IP address of the company the domain name server (DNS) stores an index of domain names and IP addresses web browser sends a request to the web server / IP address</p> <p>Received Data for the website is stored on the company's web server webserver sends the data for the website back to the web browser web server uses the customer's IP address to return the data the data is transferred into Hyper Text Mark-up Language (HTML) HTML is interpreted by the web browser (to display the website)</p> | 7 |

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| Question | Answer | Marks |
|----------|--|-------|
| 3(a) | <ul style="list-style-type: none"> - Part 1 (access) protocol - Part 2 domain (name) - Part 3 filename | 3 |
| 3(b) | <p>Four from:</p> <ul style="list-style-type: none"> - IP address is used to identify a device (on the Internet / network) - IP address is allocated by the network/ ISP - Can be used in place of URL - IP addresses can be IPv4 or IPv6 - IP address can be static ... - ... meaning it doesn't change each time it is connected to the Internet - IP address can be dynamic - ... meaning that it can change each time a device is connected to the Internet - Any valid example (e.g. xxx.xxx.xxx.xxx or xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx) | 4 |
| Question | Answer | Marks |
| 5(a) | <p>Any four from:</p> <ul style="list-style-type: none"> Data / files Stored in a <u>text file</u> Downloaded to a user's computer when a website is visited // webserver sends to web browser Stored on a user's computer Stored by a browser Detected by the website when it is visited again | 4 |
| 5(b) | <p>Any two from: e.g.</p> <ul style="list-style-type: none"> To store personal information/data To store login details To save items in an online shopping basket To track/save internet surfing habits // to track website traffic To carry out targeted advertising To store payment details To customise a webpage // to store user preferences Store progress in online games/quizzes | 2 |

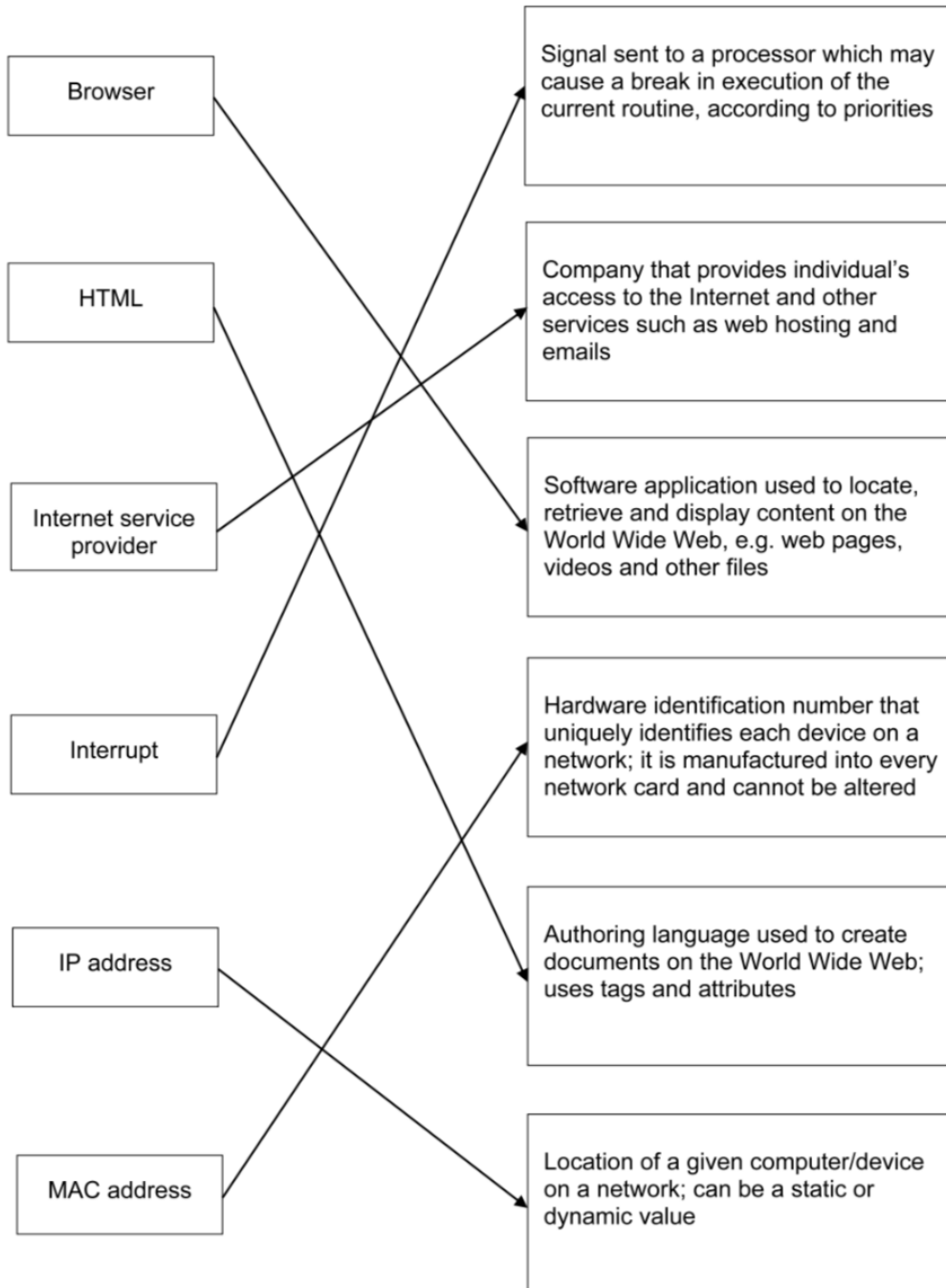
3 (a)

| Statement | True | False |
|--|------|-------|
| Cookies can destroy or modify data in a computer without the user's knowledge | | ✓ |
| Cookies generate website pop-ups | | ✓ |
| Cookies allow a website to detect whether a viewer has viewed specific web pages | ✓ | |

[3]

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4



[5]

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- 6 (a) Any **three** from:
- hypertext mark-up language
 - used to create/develop/author webpages
 - translated by a browser to display webpages
 - uses (opening and closing) tags to display/format content
- [3]

- (b) **Structure:**
- instructs how the layout of the content is displayed

Presentation:

- instructs how the content will be formatted e.g. colour/style/CSS
- [2]

- (c) Any **three** from:
- displays web page
 - interprets/translates the HTML document
 - interprets/translates embedded scripting, for example JavaScript
 - provides functions, such as bookmarks and history
 - identifies protocols, such as https, SSL
- [3]

- 10 (a) Any **three** from:

- hyper text mark-up language
- uses both structure and presentation
- web-authoring language/software // used to create websites/webpages
- uses tags to define e.g. colour / font / graphics / layout

[3]

- (b)

File name: ComputerSciencePapers

Protocol: http(://)

Web server name: www.cie.org.uk

[3]