

1.3 EXCHANGING DATA · 1.3.4

Search indexing, PageRank & server/client-side

Original practice questions · 33 marks · about 45 minutes · spec 1.3.4(b)(c)(d)

Instructions. Answer all questions. The number of marks is shown in brackets []. Quality of written communication is assessed in the extended-response question.

1

Total: 7 marks

An online bookshop wants its pages to appear in search engine results.

- (a) Explain the purpose of web crawler software used by search engines. [2]

.....

- (b) Describe what is meant by search engine indexing, and how it affects the user of a search engine. [4]

.....

- (c) State what is meant by a *metatag*. [1]

.....

2

Total: 6 marks

Search engines use the PageRank algorithm to order results.

- (a) Explain how the PageRank algorithm decides that one page is more important than another. [3]

.....

- (b) State what is meant by the term *damping factor*. [1]

.....

- (c) Give **two** other factors that can affect the rank of a web page. [2]

.....

3

Total: 4 marks

A web page can be processed client-side or server-side.

(a) State what is meant by *client-side processing*. [1]

(b) Explain one advantage of client-side processing. [2]

(c) State one type of task that should be carried out server-side. [1]

4

Total: 4 marks

A shopping website lets the user apply a discount code at the checkout, which changes the total price.

Explain why the discount code and the new total should be checked and recalculated server-side, even if the website also updates the price in the browser. [4]

A new business is launching a website and wants it to appear near the top of search results so customers can find it.

[12]

END OF QUESTIONS