# Homework 6 Search engine indexing and PageRank

1. Chris owns a small online bicycle store selling bike parts and accessories.   
   Customers often find the store via a web search using a search engine.  
   1. Explain the purpose of web crawler software used by search engines. [2]
   2. In the construction of the website, Chris included metatags in each web page.
      1. Give **two** examples of metatags that Chris may have applied to the   
         home page of his website. [1]
      2. Explain how metatags are used in the search process. [2]
2. Describe what is meant by search engine indexing, and how this affects the user   
   of a search engine [4]

1. The PageRank algorithm is used by Google to decide how relevant a web page is. The original algorithm is:

**PR(A) = (1-d) + d (PR(Ti)/C(Ti) + … + PR(Tn)/C(Tn))**

* **PR(A)** is the PageRank of page A
* **PR(Ti)** is the PageRank of pages Ti which link to page A
* **d** is the damping factor
* **C(Ti)** is the number of outbound links on page Ti
  1. The algorithm uses a damping factor *d*. Explain the purpose of *d*. [2]
  2. Suggest three factors that affect the rank of a web page. [3]

Total 14 Marks