# Homework 1 Structure of the Internet

1. A large multinational corporation is setting up new head offices in China for which it requires a block of 1,000 IP addresses.   
     
   It wants its own direct connections to the Internet without involving an ISP, so instead contacts the appropriate Regional Internet Registry.  
   1. Define the following terms: [3]
      * ISP
      * IP address
      * Internet Registry
   2. The Local Registry cannot provide enough addresses as there are not enough available. Explain why this might be the case. [2]
2. Web pages are accessible by typing a URL into the address bar of a web browser, for example <http://theimportanceofhomework.co.uk/hourseverynight.html>
   1. Using the example, explain what the components of a URL are. [3]
   2. State the Top Level Domain (TLD) for this address. [1]
   3. URLs rely on DNS. Explain how this system is used to determine the destination IP addresses of the required resource. [3]
   4. Traditionally top-level domains were based on countries. As the Internet has expanded there have been several more top-level domains added.   
        
      How do local DNS servers know when new top-level domains are added? [4]
   5. Describe how the Internet and the World Wide Web are different [4]

[Total 20 Marks]