THE BRITISH COMPUTER SOCIETY

THE BCS PROFESSIONAL EXAMINATION
Diploma

THE INTERNET & THE WORLD WIDE WEB

26th April 2004 – 10.00 a.m. – 12.00 p.m.
Answer FOUR questions out of SIX. All questions carry equal marks.
Time: TWO hours.

*The marks given in brackets are **indicative** of the weight given to each part of the question.*

1. *a)* Define the terms *HTML, tag* and *hyperlink.*   **(6 marks)**
    b) Why are standards important for HTML?   **(6 marks)**
    c) How are standards established for HTML?   **(5 marks)**
    d) Explain, using some sample HTML tags, the basic structure of a simple web page. **(8 marks)**

2. A minor celebrity has approached you to produce a web site for her fan club. Having seen other such sites, she has ambitious ideas for her own site. Apart from the usual biographical information which is text and image based, she would like her fans to be able to download audio and video clips of her recent concert tour. Initially these would be free, but ultimately she would like to be able to take payment for these as well as the usual mugs and t-shirts. Unfortunately, her budget is limited and therefore she has decided to phase the development of her site.

    a) How would you advise her to phase the development of her site?   **(4 marks)**
    b) What are the key stages in the production of her site?   **(7 marks)**
    c) What software tools would be used in the development of the site and what would they be used for?
                                                                                          (7marks)
    d) What are the principle design issues associated with the site?   **(7 marks)**

3. *a)* Define the acronym DNS.   **(2 marks)**
    b) Explain the purpose of DNS.   **(5 marks)**
    c) Why do users frequently experience DNS lookup errors?   **(8 marks)**
    d) Compare and contrast dialup and broadband as Internet connection methods.   **(10 marks)**

4. You have been employed as a freelance designer for a web authoring company that has been contracted to produce a cinema web site. The site will have a main booking page that allows customers to view film information and purchase tickets online by people accessing the site from home.

    a) Provide an initial design sketch that could be used to produce a **prototype** for the main booking page of the site.   **(7 marks)**

    b) Briefly describe the **design** you have produced, explaining the design decisions made.   **(8 marks)**

    c) List the types of technologies that would be used in **producing** the main booking page you have designed and describe the role they would play in your design.   **(10 marks)**

5. *a)* Define the terms *client application* and *server application* and their associated characteristics. Furthermore, describe how they interact with each other. **(12 marks)**

b) There are various hosting options available to organisations. Three of the available options are: Shared Hosting Environments, Dedicated Servers and Collocated Servers. Define what each of these three types is and differentiate between them. **(13 marks)**

6. Use of e-mail as a communications medium is now prolific.
a) The three main paradigms for accessing messages are offline operation, online operation and disconnected operation. Differentiate between these three types. **(6 marks)**

b) Define the term MIME and describe what benefits it provides for e-mail services. **(9 marks)**

c) POP3 and IMAP are two methods of receiving mail. Briefly define the two terms, describe what features are common between them and what differentiates them. **(10 marks)**