NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF APPLIED SCIENCE
COMPUTER SCIENCE DEPARTMENT
MAY EXAMINATIONS 2002

SUBJECT: INTERNET AND WEB DESIGN
CODE: **SCS 2204**

INSTRUCTION TO CANDIDATES

Answer any five questions. Paper contains Six questions.

Time: 3 hours

QUESTION ONE

a)   Define the following
  i)   Internet
  ii)   ii) Intranet
  iii)   iii) Gateway
  iv)   iv) peer to peer network   [5]

b)   Communication is important, nature has provided verbal communication whereas technology advancement has in turn provided the option of electronic mail (e-mail). Explain and describe the structure of e-mail, as well as the types of e-mail (include the protocol used by each type).[8]

c)   According to the developers of Java programming language, what is it? What is JavaScript? Compare and contrast Java and JavaScript?   [7]

QUESTION TWO

a)   If you were involved in a chat room session, what would the following stand for?
  i)   AFAIK
  ii)   ii) BTDT
  iii)   iii) CID
  iv)   iv)
  v)   v) DBEYR   [5]

b)   Define what is a protocol. Describe and explain the role of the transmission control protocol (TCP) and the Internet protocol (IP) in the transfer of information over the Internet.   [7]

c)   Describe, compare and contrast the finger service and white pages directories service.   [8]

QUESTION THREE

a)   Explain what are client/server systems   [5]

b)   With the aid of example, explain the structure of standard Internet addresses (including subdomain). Also compare and contrast TCP/IP and UUCP networks   [8]

c)   What is the Internet? What is the World Wide Web? Compare and contrast these technologies?   [7]

QUESTION FOUR

a)   JavaScript is an object-based language, which means it supports objects and many of the fundamental object oriented concepts. Define the following,

   i)   Encapsulation
   ii)   ii) polymorphism
   iii)   iii) Dynamic binding

   JavaScript provides objects that can be grouped into the following three classes built-in objects, HTML objects, and browser objects.

   iv)   Name (and describe the role) of two built built-in objects   [5]

b)   What is the common gateway interface?
   There are two possible functions or roles that a CGI can fulfil, that of information conduit and that of the processor itself. With the aid of diagrams explain these two roles.   [6]

c)   There are four types of protection that can be applied to most any product, including software:
   • Copyrights
   • Patents

- Trade Secrets
- Trademarks

Explain how each provides intellectual property protection as well as the advantages and disadvantages of each methodology. [9]

QUESTION FIVE

a) Given that the fully-qualified domain name is *nust.com*, the path is *scs2204* and the filename is *TestingTimes.exe*. Give the URL if the file lies on the following servers

    i)   A file on an anonymous FTP server.
    ii)   A file on a world wide web server.
    iii)   A file on a gopher server.
    iv)   A file on a Usenet newsgroup.
    v)   A file on WAIS server. [5]

b) Assume you have a style sheet file (with defined attributes) whose name is *CoolStyles.css*, placed in a directory called *styles* i.e. *c:\styles*. Style sheet methods can be applied at four different levels, explain each of these levels. Give a HTML coded example for each level, use the file *CoolStyles.css* where appropriate. [8]

c) CGIs can be built in any language that can either be executes, compiled or interpretted within the same system that the web server in on. Give at least three factors that have to be considered when selecting a language for CGI development [7]

QUESTION SIX

a) Name five mistakes that people can make in the design phase of a
    website in terms of usability.   [5]

b) Write the HTML code that will produce what is given below.

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[7]

c) Comment on the impact of the Internet on the privacy, societal and legal
aspects of life.   [8]

END OF QUESTION PAPER

GOOD LUCK!