



SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

Higher National Diploma in Information Technology

First Year, First Semester Examination – 2016

HNDIT1106 – Web Development

Model Answers

Instructions for Candidates:

Answer four questions including question 01.

All questions carry equal marks.

No. of questions : 05

No. of pages : 05

Time : Two (02) hours

01.

- (i). Select the most suitable answer from the given list and fill in the blanks.
- a) In 1969, the computer network called **ARPANET** started to communicate data using packet switching concept.
 - b) **WWW** is a system of interlinked hypertext documents accessed via the Internet.
 - c) **Internet governance** is the development and application of shared principles, norms, rules, decision-making procedures and programs that shape the evolution and use of the Internet.
 - d) An international communications standard for sending voice, video, and data over digital telephone lines or normal telephone wires is called as **ISDN**.
 - e) **WIFI** is a networking technology that allows computers and other devices to communicate over a wireless signal.
 - f) No matter what type of computer system you connect to the Internet, if it uses **TCP/IP**, it can exchange data with any other type of computer.
 - g) **URL** is an address to the current location of information.
 - h) In computing, a **hyperlink** is a reference to a document that the reader can directly follow, or that is followed automatically.
 - i) A **Search Engine** is a piece of application software that sits on a powerful computer (a server) on the Internet.
 - j) **FTP** is the Internet tool used to copy files from one computer to another.
- (2 X10 = 20 marks)**

ISDN, ADSL, Internet, FTP, ARPANET, WWW, TCP/IP, IP Address, Internet governance, Hyperlink, WIFI, Wireless, URL, Network, DSL, Hypertext, SDSL, Search Engine, Web Browser

(ii). State whether the following statements are true or false.

- a) Internet Service Providers are responsible to publish information on the internet. **(false)**
- b) The gateway allows the two different types of networks to "talk" to each other. **(true)**
- c) Satellite is one of the wireless internet connection option. **(true)**
- d) ADSL connection has different up and download speeds. **(true)**
- e) Wireless WAN uses radio signals to transfer data. **(true)**

(1X5 = 05 marks)

(Total 25 marks)

02.

- (i). The World Wide Web and the Internet are not the same thing. Give a definition for each term that makes the distinction clear. **(04 marks)**

Internet is a network of computer networks.

WWW is a system of interlinked hypertext documents accessed via the Internet.

WWW is a part of the Internet, which supports hypertext documents, allowing users to view and navigate different types of data.

- (ii). Nowadays many web browsers are available.

- a) What is the purpose of having a web browser? **(03 marks)**

A web browser is use for retrieving, presenting, and traversing information resources on the World Wide Web.

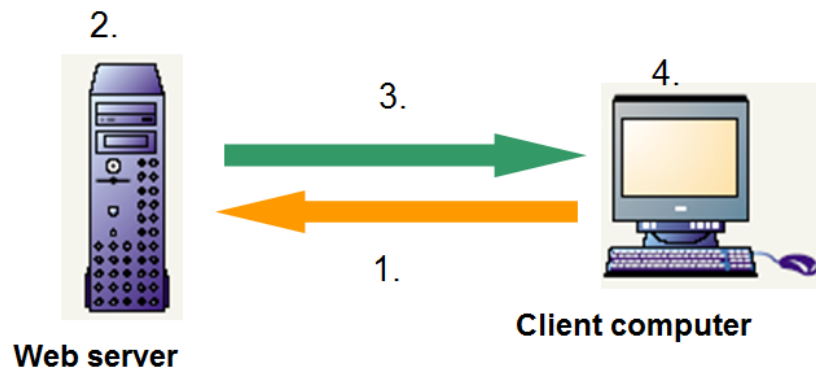
- b) List three examples for popular web browsers. **(03 marks)**

Microsoft Internet explorer, Google chrome, Opera, Mozilla Firefox etc.

- (iii). Explain the role of DNS in the operation of the Internet. **(05 marks)**

Domain Name System (DNS) is a system for naming computers and network services that is organized into a hierarchy of domains. A DNS server provides name resolution for TCP/IP-based networks.

- (iv). Static web page is a web page with contents that remain fixed and unchanged once it has been created by the author. The following diagram represents architecture of static web site. Name 1 → 4 numbers in the figure given below.



1. Client requests web pages
2. Web server looks for the corresponding HTML files
3. HTML files return to client
4. Client browser formats HTML files

(1X4 = 04 marks)

- (v). Briefly describe the effect of collaborative web in modern information exchange.

(06 marks)

- Many individuals can publish their content in one news forum.
- Individuals can provide feedbacks on that published content to confirm or refuse that.
- This process will help to spread trustful news and updates in fast around the world.

Etc.

(Total 25 marks)

03.

(i).

- a) What is meant by computer security? (02 marks)

Computer security is the protection of information systems from theft or damage to the hardware, the software, and to the information on them, as well as from disruption or misdirection of the services they provide.

- b) Mention three types of security. (03 marks)

- Network Security
- System and software security
- Physical Security

- c) List down three goals of computer security and briefly describe each.

- **Integrity:**
Guarantee that the data is what we expect
- **Confidentiality:**
The information must just be accessible to the authorized people
- **Reliability:**
Computers should work without having unexpected problems

▪ **Authentication:**

Guarantee that only authorized persons can access to the resources

Give marks for any three goals.

(2X3 = 06 marks)

(ii).

a) What do you mean by Malicious Software? **(02 marks)**

Malicious software, commonly known as malware, is any software that brings harm to a computer system.

b) List two forms of Malware? **(02 marks)**

Worms, Viruses, Trojans, Spyware, Adware and Rootkits etc.

c) Write down two symptoms of Virus Attacks. **(02 marks)**

- **Computer runs slower than usual**
- **Computer no longer boots up**
- **Screen sometimes flicker**
- **PC speaker beeps periodically**
- **System crashes for no reason**
- **Files/directories sometimes disappear etc.**

Give marks for any two symptoms.

(iii). Describe the differences between hackers and crackers. **(04 marks)**

A hacker's aim is to fix flaws within systems and to improve their security, without doing any damage to the system or causing any economic loss. Many times hackers are IT security professionals, who are hired by companies in order to audit network security or to test software for design flaws.

Instead, crackers break into systems illegally for personal gain or vandalism. Most crackers are not very knowledgeable or skillful with programming ability, so unlike hackers they rely on automated programs that are downloaded from disreputable websites.

(iv). Write the tools which are available to keep children safe online and explain them.

(04 marks)

Parental controls – to block unwanted sites, usage controls, which constrain the usage of these devices such as placing time-limits on usage or forbidding certain types of usage.

(Total 25 marks)

04.

(i). What is Social Networking? Give two examples.

Social networking is the grouping of individuals into specific groups, like small rural communities or a neighborhood subdivision, if you will. (2 marks)

E.g. Facebook, Twitter, Myspace etc. (2 marks)

(ii). Practically, there are many limitations of e-commerce.

a) Give three technological limitations of e-commerce. (3 marks)

- **Lack of universally accepted standards for quality, security, and reliability.**
- **Insufficient telecommunication bandwidth**
- **Software development tools are still evolving.**
- **Special web servers are needed in addition to the network servers.**

b) Give three non- technological limitations of e-commerce (3 Marks)

- **Lack of trust**
- **Varying international government rules**
- **Some customers like to feel and touch products.**

(iii). Compare and contrast traditional trading and e-commerce.

	Traditional Commerce	E-Commerce
1	Heavy dependency on information exchange from person to person.	Information sharing is made easy via electronic communication channels making little dependency on person to person information exchange.
2	Communication/ transaction are done in synchronous way. Manual intervention is required for each communication or transaction.	Communication or transaction can be done in asynchronous way. Electronics system automatically handles when to pass communication to required person or do the transactions.
3	It is difficult to establish and maintain standard practices in traditional commerce.	A uniform strategy can be easily established and maintain in e-commerce.
4	Communications of business depends upon individual skills.	In e-Commerce or Electronic Market, there is no human intervention.

Etc.

(2X2 = 4 marks)

(iv). Consider the following HTML document.

Is this a valid HTML? **No** (1 mark)

If not, explain each error and propose a correction.

```
1 <html>
2 <head> <title>
3 Hello
4 </head> </title>
5 </html>
6 <body>
7 <h3> Text <h3>
8 <boldtext> Example </boldtext>
9 </body>
```

- **Line 4: close </title> before </head>**
- **Line 5: </html> should be at the end of the document**
- **Line 7: <h3> tag should be closed. </h3>**

- Line 8: `<boldtext>` is an invalid tag. It should be:
` Example `

(1X4 = 4 marks)

(v). Explain three features of web 2.0 (6 Marks)

Give marks for explaining at least three features:

E.g.

- information sharing
- interoperability
- user-centered design
- collaboration on the WWW etc.

(Total 25 marks)

05.

(i). Write the purpose of following HTML tags.

- `` - Browsers display the text as bold.
- `<Cite>` - Represents a document citation (italics). For titles of books, films, etc. Typically displayed in italics.
- `<Center>` - Will center elements.
- `<Hr>` - Browser display a horizontal line (rule)

(1X4 = 4 marks)

(ii). Rewrite the `<BODY>` tag with necessary attributes to view the page in yellow color and font in blue color. (2 marks)

`<BODY BGCOLOR = yellow TEXT = blue>`

Document's content. `</BODY>`

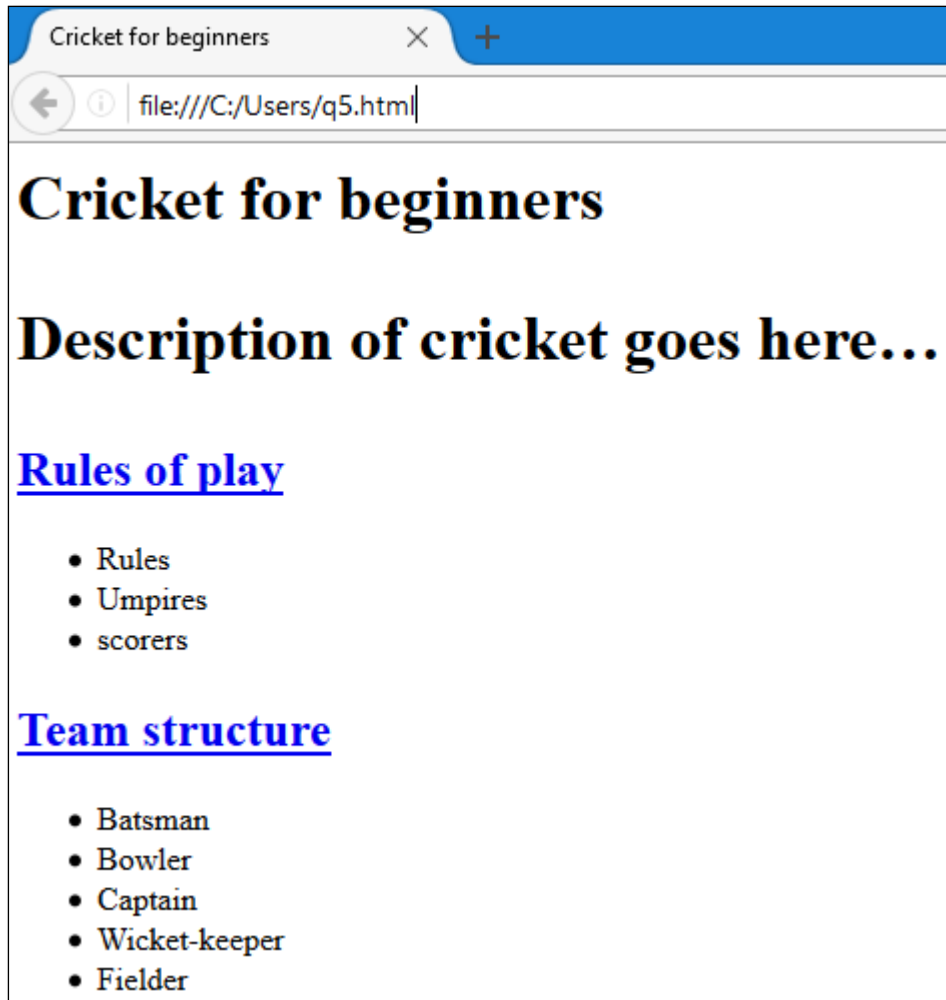
(iii). What is the output of the following code fragment? (6 marks)

```
<html>
<head>
  <title>Cricket for beginners</title>
</head>
<body>
  <h1>Cricket for beginners
  <p>
    Description of cricket goes here...
  </p>
  <h2><a href="rulesofplay.html">Rules of play</a></h2>
  <ul>
    <li>Rules</li>
    <li>Umpires</li>
    <li>scorers</li>
  </ul>
  <h2><a href="teamstructure.html">Team structure</a></h2>
  <ul>
    <li>Batsman</li>
```

```

<li>Bowler</li>
<li>Captain</li>
<li>Wicket-keeper</li>
<li>Fielder</li>
</ul>
</body>
</html>

```



(iv). Write HTML codes to display the following table in a web page. (8 marks)

Personal Details		
Name:	Bill Gates	
Telephone:	Office	555 77 854
	Mobile	555 77 855

```

<table border = "1" width = 75%>
  <tr colspan = 3>
    <th colspan = 3> Personal Details </th>
  </tr>
  <tr>
    <th>Name:</th>
    <td colspan = 2>Bill Gates</td>
  </tr>
  <tr>
    <th rowspan="2">Telephone:</th>
    <td>Office</td>
    <td>555 77 854</td>
  </tr>
  <tr>
    <td>Mobile</td>
    <td>555 77 855</td>
  </tr>
</table>

```

(v). Write HTML codes to display the following set of frames in a web page.

(05 marks)

F1.html	
F2.html	F3.html
	F4.html
	F5.html

```

<html>
  <head>
    <title> Compound Frames Page</title>
  </head>
  <frameset rows="25%,*">
    <frame src= "F1.html" name = "F1">
    <frameset cols="30%,*">
      <frame src="F2.html" name="F2">
      <frameset rows="25%,25%,*">
        <frame src="F3.html" name="F3">
        <frame src="F4.html" name="F4">
        <frame src="F5.html" name="F5">
      </frameset>
    </frameset>
  </frameset>
</html>

```

(Total 25 marks)