Instructions for Candidates:	No. of questions : 05
Answer four (04) questions **including question 01**	No. of pages : 04
All questions carry equal marks	Time : Two (02) hours

Question 01

(i)   Select the most suitable answer from the given list and fill in the blanks.

    a. A <u>Network</u> is a collection of computers and devices interconnected by communications channels that facilitate communications among users and allows users to share resources.

    b. The <u>Client-server model</u> is a pattern of network communication in which clients send requests to servers over a computer network and the servers send back responses.

    c. The <u>Internet</u> is the largest communication network ever conceived in the world.

    d. In addition to an IP address, most Internet hosts or servers have ………………….address, which uses words.

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

    f. <u>Apache</u> is an example for web server.

    g. <u>HTML</u> is a client side language which can be used for designing the statistic web pages.

    h. <u>Telnet</u> is a specialized service that lets you use one computer to access the contents of another computer.

    i. <u>FTP</u> is the protocol for exchanging files over the Internet which uses the Internet's TCP/IP protocols to enable data transfer.

    j. <u>IRC</u> is a service that allows users to communicate in real time by typing text in a special window.

(2x10=20 marks)

(ii)   State whether the following sentences are True or False.

    a. Customers should consider bandwidth and cost before selecting an Internet package (True)

    b. Internet Service Providers do not allow organizations and individuals to publish information on the Internet. (False)

    c. ISDN stands for Integrated Server Digital Network. (False)

    d. With leased connection, your computer will be directly connected to the Internet using a dedicated transmission line. (True)

    e. Hotspots are sites that offer Internet access over a wireless local area network (WLAN) by using a router connected to an Internet Service Provider. (True)

(05 marks)

(Total 25 marks)

Question 02

(i)
    a. Explain the purpose of TCP/IP protocol.   (02 marks)

       Every computer and network on the Internet uses the same protocols (set of guidelines or rules and procedures) to control timing and data format

    b. List three (03) other protocols frequently used in the Internet.   (03 marks)

       SMTP, HTTP, FTP

(ii)   Compare and contrast Static and dynamic web sites.   (06 marks)

	Static Web Pages	Dynamic Web Pages
Composing Process	Create each page separately by writing the HTML codes or using a WYSIWYG editor.	Require the creation of a general template first. With the template built, only the actual content for each page needs to be created.
Maintenance	Adding new content means creating new separate web pages. Any changes in the structure require manual update of each page.	New content is inserted into the structure template. Any changes to the structure mean updating the template only.
Workload on the server	Low workload. Web server loads static files from the disk.	Dynamic page is created on-the-fly with a use of additional software. This increases server's load.
Knowledge	Require basic HTML knowledge.	Require more programming knowledge.

(iii)
    a. Briefly describe collaborative website concept.   (02 marks)

(iv)   A collaborative Web site comprises the perpetual collective work of many authors

    a. Write two examples of collaborative web sites.   (02 marks)

       Wiki, Blog or any suitable answer

(v)
    a. Briefly explain the term "electronic commerce".   (02 marks)

       eCommerce, consists of the buying and selling of products or services over electronic systems such as the Internet and other computer networks. Simply, e-commerce means doing business online.

   List three (03) features of an ecommerce site   (03 marks)

   Any three give three marks

   Creation of graphics, Product information, Addition of new products, Shopping carts, Credit card processing, Sales report generation, Rich User Accounts, Product Comparison, Product Image Zoom-in Capability, Versatile Shipping Options, Advanced Marketing and Promotions Tools, Analytics and Reporting, Multiple Images Per Product

(vi)   Social networking become more popular among Internet users

    a. List two(02) example for social networks   (02 marks)

   Facebook, Google +, My space, Academia.edu (any suitable answer)

    b. Describe three (03) benefits of using social networks   (03 marks)

The most cost effective way to keep in touch with your people (friends, classmates, and relatives etc.).

Not bound by any geographical and cultural differences. These sites are a window to different cultures and places.

Allows to send and receive messages, upload photos, and videos.

A tool to promote business, services, products, or websites.

(Total 25 marks)

Question 03

(i)   List three goals of computer security   (03 marks)
        Integrity, confidentiality, reliability

(ii)   Explain the difference between hackers and crackers   (04 marks)

Hackers: access systems in an unauthorized manner. Hackers have no malicious intent, (i.e., they do not intend to cause harm).They are only motivated by curiosity, personal satisfaction, or gaining reputation etc.

Crackers: Individuals who cause damages to information systems with a malicious intent often for financial gains.

(iii)

a. What is computer virus?   (02 marks)

A malicious code that infects software on a computer, thereby causing undesired results, such as changing system settings, deleting files, disabling functions, and some even hardware damage (flashing the CMOS).

b. List two (02) symptoms of a computer virus attack.   (04 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, Denial of Service (DoS)

(iv)   A password can be used for user authentication to access some secured resources in the web.

a. List three (03) best practices that you can apply in creating strong passwords. (03 marks)

Always use a password of a minimum of eight characters, Do not use your name, birthday, name of a close relative as your password since these can be easily guessed, Use non-dictionary words for your password, Always use a combination of uppercase/lowercase characters, numbers, Use at least one special character in your password (e.g., !,#,$,@)

b. Explain the following two types of attacks on password   (04 marks)
   i.   Brute force attack

Here the attacker tries all possible combination for a password until he gets the correct one

    ii.   Dictionary attack
            The attacker tries all the words in a dictionary with the hope of discovering the password (including names, places, etc.)

(v)

   a. Briefly explain the term "Identity theft".   (03 marks)

Identity theft is the act of using someone's Identity and good reputation by another individual for financial gains

   b. List two (02) steps that you can take to prevent identity theft.   (02 marks)

Do not disclose your private information over emails, Always check whether a website is a trusted one before you enter any sensitive information, Always check whether the website supports secure transactions (others cannot see the information you send to secure sites), Always read privacy policies given on websites

(Total 25 marks)

Question 04

(i)   Briefly explain following concepts and give two (02) examples per each.   (08 marks)
    a. Web browser

A web browser is a software application for retrieving, presenting, and traversing information resources on the World Wide Web.
e.g. Firefox, Google Chrome, Internet Explorer/Microsoft Edge,Opera, and Safari.

    b. Search engine

A web search engine is a software system that is designed to search for information on the World Wide Web. E.g. Google,bling,yahoo
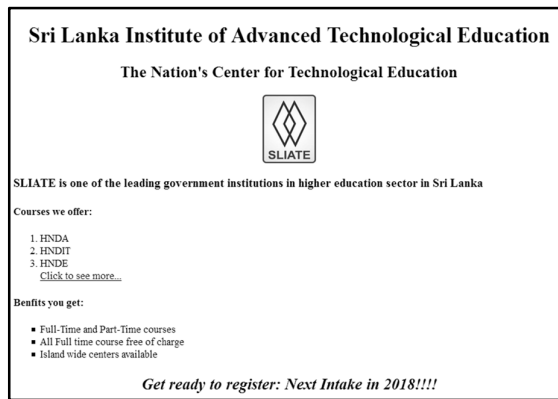
(ii)   State two attributes for each of the following HTML tags.   (06 marks)
           <FONT> type, size, color
           <TABLE> align, width, height, border, bgcolor ,cellpading ,cellspacing ,width
           <IMG>   src , align, border, size, width, height

(iii)   Write HTML Code to generate the web page given bellow.   (11 marks)(Consider that the name of the picture is "logo.jpg" and the link connects to the page http://www.sliate.ac.lk)

4

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<HTML>

<BODY>

<center><H1>Sri Lanka Institute of Advanced Technological Education</H1>

<H2>The Nation's Center for Technological Education</H2> } (02 marks)

<img src="sliate_logo.jpg" alt="SLIATE logo here" width=80 height=100>(01 mark)

</center>

<p><h3>SLIATE is one of the leading government institutions in higher education sector in Sri Lanka </h3></p>   (0.5 mark)

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HNDA

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HNDE

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   (02 marks for ordered list)

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<ul type="Square">

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   (02 marks for unordered list)

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</BODY>

</HTML>   **(Total 25 marks)**

5

Question 05

(i)
   a. What does CSS stand for?   (02 marks)
      CSS stands for Cascading Style Sheets
   b. Briefly explain the purpose of using CSS in creating web sites   (02 marks)

CSS describes how HTML elements are to be displayed on screen, paper, or in other media

CSS saves a lot of work. It can control the layout of multiple web pages all at once

(ii)   Describe the purpose of using HTML Frames.   (03 marks)

Frames are used to break up the single browser window into multiple windowpanes. Each windowpane is filled with an HTML document.

(iii)   Sketch the output of the following code segment   (08 marks)

<TABLE Border="2" Align="Center" Width =50% Cellpadding="10">

<TR> <TH Colspan="3">HNDIT 1st year Semester I</TH></TR>

<TR><TH>Module Code</TH> <TH>Module Type</TH> <TH>Credits</TH> </TR>

<TR><TD>HNDIT 1201 </TD><TD>Database Management Systems</TD><TD>02</TD></TR>

<TR><TD>HNDIT 1202 </TD><TD>Computer Hardware</TD> <TD>02</TD></TR>

<TR><TD Colspan="2" Align="Center">Total</TD><TD>04</TD></TR>

</TABLE>

HNDIT 1st year Semester I		
Module Code	**Module Type**	**Credits**
HNDIT 1201	Database Management Systems	02
HNDIT 1202	Computer Hardware	02
Total		04

(iv)   Write HTML code to produce the following output   (10 marks)

<FORM Action="URL" method="get">   (01 mark)

<h2><u><CENTER>Exam Application Form</CENTER></u></h2>   (01 mark)

<TABLE>

<TR HEIGHT=40><TD WIDTH=125>

Name with Initials:</TD><TD> <INPUT TYPE="TEXT" Size=40 Name="firstName">
</TD></TR>   (01 marks)

<TR HEIGHT=40><TD >Regstration No: </TD><TD><INPUT TYPE="TEXT" Size=25
Name="RegNo"></TD></TR>   (01 marks)

<TR HEIGHT=40><TD>Select Course:</TD><TD><INPUT TYPE="radio"
NAME="choice">

HNDIT <INPUT TYPE="radio" NAME="choice"> HNDA<INPUT TYPE="radio"
NAME="choice"> HNDE </TD></TR>   (02 marks)

<TR HEIGHT=40><TD>Select Year :</TD><TD HEIGHT =50><select id = "myList">

        <option value = "1">1st year</option>

        <option value = "2">2nd year</option>

        <option value = "3">3rd year</option>

        <option value = "4">4th year</option>

    </select></TD></TR>   (02 marks)

<TR><TD><INPUT TYPE="submit" VALUE="Submit"></TD><TD>   (01 marks)

<INPUT TYPE="RESET" VALUE="Cancel"></TD></TR>   (01 marks)

</TABLE>

</FORM>   **(Total 25 marks)**

HNDIT1106- Web Development- 2017 1st semester (Answers)