

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 – 2018

HNDIT1106 – Web Development (Model Answer)

Instructions for Candidates:

Answer four (04) questions **including question 01**

All questions carry equal marks.

No. of questions : 05

No. of pages : 05

Time : Two (02) hours

Question 01

(i)

- (a) ARPANET .
- (b) IP
- (c) less.
- (d) collaborative
- (e) web 2.0
- (f) leased line
- (g) bps
- (h) trojans
- (i) Phishing
- (j) checkboxes

(2x10=20 marks)

(ii) Select the most suitable answer.

(01 x5 = 05)

- (a) ii)
- (b) iv)
- (c) ii)
- (d) iii)
- (e) iv)

Question 02

(i) Write down two (02) functions of each of the following protocols.

(a) TCP

(02 marks)

TCP (Transmission Control Protocol)

Handle the movement of data

Breaks the original message in to small packets & sequentially labels them

(b) IP (02 marks)

IP (Internet Protocol)

Delivery of data packets

Disassembling and reassembling of data packets

(ii) List three (03) characteristics of IP addresses. (03 marks)

(Any 3 from the followings.)

- unique
- numeric identifiers
- four numbers, each of which contains one to three digits, with a single dot (.) separating each number or set of digits.
- each part a number between 0 and 255
- needed by every device that connects to the internet
- either static or dynamic
- reveal information about the digital device such as continent, country, region, and city in which a computer is located, the ISP, and such technical information as the precise latitude and longitude of the country

(iii) Expand the abbreviations given below. (04 marks)

- (a) WWW- World Wide Web
- (b) HTTP -Hyper Text Transfer Protocol
- (c) DNS-Domain Name System/ Domain Name Service
- (d) URL -Uniform Resource Locator

(iv) Write down three (03) popular services of Internet. (03 marks)

(Any 3 from the followings.)

- The World Wide Web
- E-Mail
- News Groups
- Telnet
- File Transfer Protocol (FTP)
- Internet Relay Chat (IRC)
- Internet telephony (VOIP)
- Social networks
- Instant Messaging
- Video Conferencing

(v) List two (02) advantages and two (02) disadvantages of social networks. (04 marks)

advantages	disadvantages
<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The risk of identity theft and fraud. • Online harassment and stalking • Grooming • Posted information will last forever - may be embarrassing in the future

(vi)

(a) Mention three (03) additional features included in Dynamic websites compared to Static websites. (03 marks)

- Dynamic Product Catalogs and online sales (Ecommerce)
- Pages can draw *ever changing* Content from external information sources
- Pages can provide Create, Retrieve, Update, and Delete functions in company database
- Pages are capable of providing interactivity such as: Forms and internal searches within the site
- Registration and Login, personal profile maintenance, and authenticated/secure access to protected or premium content

(or any other suitable answer)

(b) Give two (02) examples for client-side processing technologies used in dynamic web pages. (04 marks)

- JavaScript
- VBScript
- Java
- Java Applets
- Common Gateway Interface (CGI)
- Active Server Pages (ASP)
- HyperText Preprocessor (PHP)

(Total 25 marks)

Question 03

(i)

- (a) Briefly explain the term “E-Commerce”. (02 marks)

Buying and selling of products or services over electronic systems such as the Internet and other computer networks. OR

Buying and selling of products or services online

- (b) Write down two (02) benefits an organization can acquire from E-commerce. (04 marks)

- Global reach
- Cost reduction
- Supply chain improvements
- Extended hours:24*7*365
- Customization
- New business models
- Lower communication cost
- Improved Customer relationships
- No city business permits and fees

- (c) Mention two (02) technological limitations of E-commerce. (04 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

- (ii) Define the following terms relevant to Internet security. (08 marks)

- (a) Malicious software

Malicious software, commonly known as malware, is any software that brings harm to a computer system. Malware can be in the form of worms, viruses, trojans, spyware, adware and rootkits, etc., which steal protected data, delete documents or add software not approved by a user.

- (b) Hacker

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.

(c) Virus

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). A virus spread by making copies of itself and spreading. It may spread between files or disks, but the defining character is that it can recreate itself on its own without traveling to a new host.

(d) Spyware

This is a class of applications that spy on the users activities. They may provide others access to your system, display unwanted banner ads, or steal your confidential information

(iii) Write three (03) symptoms of spyware. (03 marks)

- Targeted Pop-ups
- Slow Connection
- Targeted E-Mail (Spam)
- System Crash
- Program Customisation

(iv) How does a software firewall work? (Explain briefly) (04 marks)

- Inspects each individual “packet” of data as it arrives at either side of the firewall
- Inbound to or outbound from your computer
- Determines whether it should be allowed to pass through or if it should be blocked

(Total 25 marks)

Question 04

(i) Briefly explain the duty of a web browser. (02 marks)

Accept and send the user requests to a server

Processing HTML tags and creating and displaying the web pages in client's monitor

(ii) Mention the purpose of the following HTML tags. (08 marks)

- (a) <CENTER> Align the content in the center of the web page
- (b) Insert an ordered list (numbered list)
- (c) Insert an un-ordered list (bullet list)
- (d) <HR> Insert a horizontal ruler in a web page

(iii) Write the html codes to generate the web page given while maintaining the correct html page structure. (15 marks)

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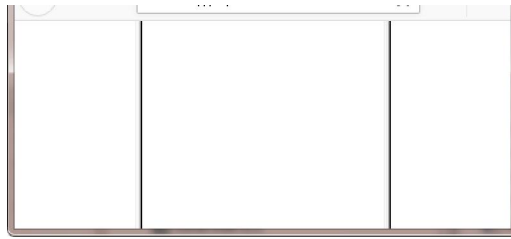
<HEAD><TITLE>SLIATE</TITLE></HEAD>      (01 mark)
<BODY bgcolor="yellow">                  (01 mark)
<CENTER>
<IMG SRC="logo.png" alt="Sliatologo">
<H1>Welcome you to SLIATE !</H1>
<H3>Sri Lanka Institute of Advanced Technological Education</H3>
<TABLE border="1" cellspacing="0">
<CAPTION align="bottom">Table 01:ATI Centers and Sections </CAPTION>
<TR> <TH>Type</TH> <TH>ATI Name</TH> <TH>Contact Number</TH> </TR>
<TR> <TH rowspan="4">ATI Centers</TH><TD rowspan="2">Galle</TD>
<TD>041 111 1111</TD> </TR>
<TR> <TD>041 888 8888</TD> </TR>
<TR> <TD>Dehiwala</TD> <TD>091 222 2222</TD> </TR>
<TR> <TD>Gampaha</TD> <TD>033 333 3333</TD> </TR>
<TR> <TH rowspan="2">ATI Sections</TH> <TD>Tangalle</TD>
<TD>047 444 4444</TD> </TR>
<TR> <TD>Vauniya</TD> <TD>024 555 5555</TD> </TR>
</TABLE>
<A HREF="http://www.sliate.ac.lk"> Click here </A>for more details
</CENTER>
</BODY> </HTML>

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(Total 25 marks)

Question 05

- (i) Briefly explain the purpose of using frames in a web page. (02 marks)
Dividing a web page into given number of partitions (rows or columns) where each partition can display a different web page in it.
- (ii) Sketch the browser view of the following html page. (06 marks)

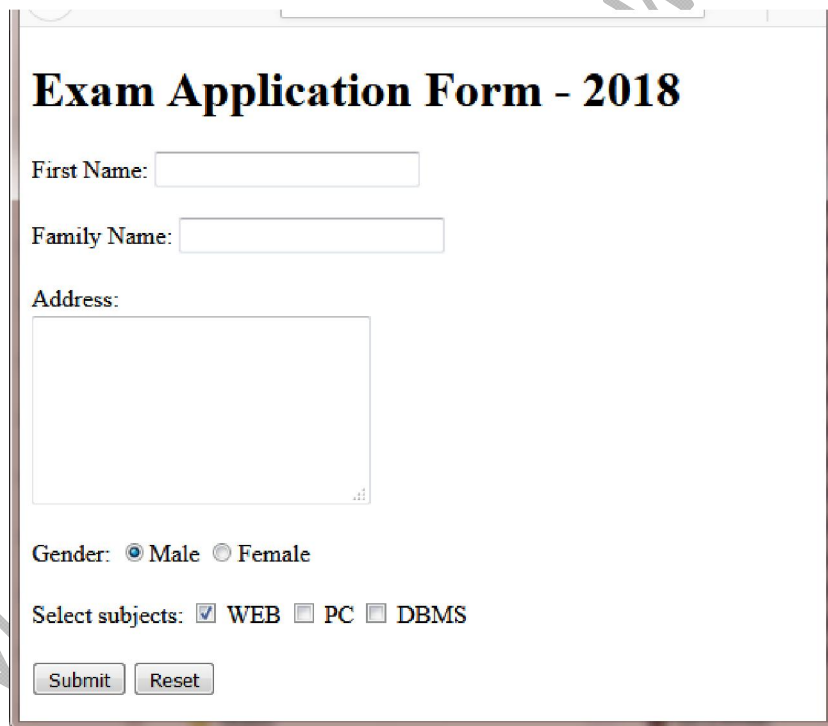


- (iii) What is the purpose of including a **Form** in a web page? (03 marks)

Forms add the ability to web pages to obtain information from the person viewing the web page, and process the information.

(or any suitable answer)

- (iv) Sketch the output of the web page generated by the following HTML codes. (14 marks)



Exam Application Form - 2018

First Name:

Family Name:

Address:

Gender: ☒ Male ☐ Female

Select subjects: ☒ WEB ☐ PC ☐ DBMS

(Total 25 marks)