



Sri Lanka Institute of Information Technology

B. Sc. Special Honours Degree/ Diploma
in
Information Technology

Final Examination
Year 1, Semester II (2015)

IT104 - Internet Technology and Applications

Duration: 3 Hours

Instruction to Candidates:

- This paper has 05 questions. Answer all questions.
- Provide answers on the answer booklet given.
- Total marks 100.
- This paper contains 08 pages including the Cover page.

Question 1**(20 marks)**

- a) Briefly explain a computer network with the aid of a diagram. (2 marks)
- b) **“Internet has been a benefit and a curse for teenagers”**. (J.K. Rowling) Do you agree with the statement? Justify using relevant examples. (4 Marks)
- c) Create the DNS resolution hierarchy for the URL given below. (3 Marks)
- <http://www.asru2015.org/CallForPapers.asp>
- d) Define the terms IP address and domain name. State two advantages of using domain names over the IP addresses? (4 Marks)
- e) “A company has bought an internet band width of 10GB.” Briefly explain the mechanism of distributing the bandwidth equally. (4 Marks)
- f) Briefly explain the importance of IPv6 against IPv4. (3 Marks)

Question 2**(20 Marks)**

a) State the main roles of **CSS** & **JavaScript** in Web Design.

(2 marks)

b) Refer the following figures, hints and answer to below questions.

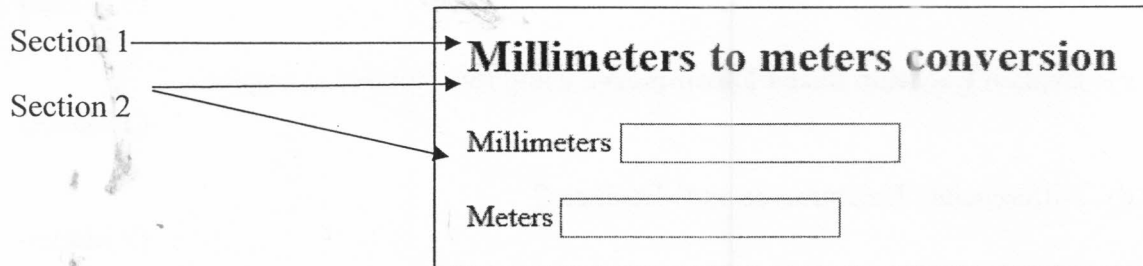


Figure 01 – MMtoMConverter.html

i) Write HTML code to display the interface above (Figure 01).

(5 marks)

ii) Write a **CSS code** (write CSS code only) to style the above interface (Figure 01) for following requirements.

- Section 1 - Display in H1 format
- Section 2 – Display text in green color

(4 marks)

iii) Analyze the following requirements and write a suitable JavaScript code.

- User can input any length in Millimeters or Meters.
- Converted value should be display in the other text box, once user clicked.
- First input value can be Millimeters or Meters.

(8 marks)

HINTS:

- Meters 1 = 1000 Millimeters

Question 3**(20 marks)**

- a) List four facts to compare Marketplace vs. E-Marketplace?
(4 Marks)
- b) How does transaction process happen in an e-commerce website? Explain using a diagram.
(5 Marks)
- c) Explain **Location based E-commerce** using two suitable examples.
(3 Marks)
- d) Differentiate E-commerce vs E-Business?
(2 Marks)
- e) **“E-commerce is not suitable for all type of goods”**. Justify this statement by providing suitable examples.
(4 Marks)
- f) Briefly explain Pure & Partial E-Commerce using a suitable examples.
(2 Marks)

Question 4**(20 marks)**

Server side programming is heavily used in web development. Server side programming enables a web page to be dynamic. One of the most popular Open-Source web development programming language is considered to be PHP.

- a) "PHP is a popular programming language". Give three reasons.

(3 Marks)

- b) Observe the code given below. The code **contains 4 errors**, Correct the errors and re-write the code.

(4 Marks)

Line No.	Code
1	<?
2	Session_start
3	\$ SESSION['VIEW']=1;
4	?>
5	<!DOCTYPE html>
6	<html>
7	<body>
8	<?php
9	echo "view " \$ SESSION['view'];
10	sessiondestroy();
11	?>
12	</body>
13	</html>

- c) Study the given codes (*Form.html* and *Processing.php*). *Form.html* uses POST method to pass values to a php code (*Processing.php*). Given code are incomplete. Complete the missing codes where the code is bold.

(7 Marks)

Line No.	Code - <i>Form.html</i>
1	<!DOCTYPE html>
2	<html >
3	<body>
4	<form >
5	Registration No:
6	<input type="text" name="regNo" />
7	Year :
8	<input type="radio" value="Year 1" name="year" /> Year 1
9	<input type="radio" value="Year 2" name="year" /> Year 2
10	<input type="submit" value="Submit" />
11	</form>
12	</body>
13	</html>

Line No.	Code - <i>Processing.php</i>
1	<!DOCTYPE html>
2	<html>
3	<body>
4	<?php
5	if(isset() && isset())
6	{
7	\$regNumber = \$_POST[];
8	\$year = \$_POST[];
9	}
10	else
11	{
12	\$error = "One or more fields are not filled";
13	echo \$error;
14	}
15	?>
16	Registration number :
17	<?php echo ?>
18	Current year :
19	<?php echo ?>
20	</body>
21	</html>

d) Go through the code given below.

(6 Marks)

- i) Explain the LOCs (Line of Codes): 2, 4, 10, 13 and 14.
- ii) LOC from 9 – 21 is can contain an error. If there is an error correct the error and re-write the corrected LOCs only.

Line No.	Code - <i>db_connect.php</i>
1	<?php
2	\$a1 = "localhost";
3	\$db = "exam";
4	if(!mysql_connect(\$a,"root","") !mysql_select_db(\$db))
5	{
6	die(mysql_error());
7	}
8	?>

Line No.	Code - <i>Delete.php</i>
9	<?php
10	require 'db_connect.php';
11	if(isset(\$_POST["Delete"]))
12	{
13	\$Query = "DELETE from database where regno=' ' \$regno' ";
14	if(!mysql_query(\$Query)){
15	echo "1 record deleted";
16	}
17	else{
18	die('Error:'.mysql_error());
19	}
20	}
21	?>

Question 5**(20 marks)**

- a) “With the constantly evolving nature of the Internet, it is crucial that users continuously protect themselves and their information”.

Justify the above statement whether it is true or false.

(2 marks)

- b) Write three risks involved with Internet.

(3 marks)

- c) Refer to the following scenario and identify the security service that has been violated, security attack type, type of the intruder. Complete the given table.

(9 marks)

Example of the attack	Security Service	Security Attack	Type of the intruder
Illegal copying of program or data files	(A)	(B)	(C)
Altering programs so they perform differently	(D)	(E)	(F)
Redirecting requests to invalid destinations	(G)	(H)	(I)

- d) How can we achieve Integrity, Authentication & Non-Repudiation by using Digital Signatures? Explain with the aids of diagrams.

(6 marks)

End of the Question Paper