



## Sri Lanka Institute of Information Technology

B.Sc. Honours Degree in Information Technology

Specialized in Information Technology

Final Examination  
Year 1, Semester 2 (2024)

IT1100 – Internet and Web Technologies

Duration: 2 Hours

June 2024

### Instructions to Candidates:

- ◆ This paper has 4 questions.
- ◆ Answer all questions in the booklet given.
- ◆ The total marks for the paper is 100.
- ◆ This paper contains 6 pages, including the cover page.
- ◆ Electronic devices capable of storing and retrieving text, including calculators and mobile phones are not allowed.
- ◆ This paper is preceded by a 10-minute reading period. The supervisor will indicate when answering may commence.

**Question 1****(20 Marks)**

- a) Compare LAN and WAN networks. (4 marks)
- b) You are asked to create a web site/web application to maintain and display SLIIT Students Exam Results. Select your choices for the below requirements and justify the answers. (8 marks)
- I. Static or Dynamic
  - II. Development languages
  - III. Database
  - IV. Network (LAN, WAN)
- c) Explain what XML is and write the XML code to store your personal data such as name, age, and school. (3 marks)
- d) A computer system can be classified into two categories depending on how its components are distributed. Name and briefly explain them. (5 marks)

**Question 2****(20 Marks)**

- a) Cookies are used to save the information about the user on the client side. Provide the answers for the below questions based on the cookies.
- (6 marks)
- I. Create a cookie which has the name as *user* and the value as *profile* which expires in three months.
- II. Print the cookie name and value of the cookie that you have created.
- III. Change the cookie value into *student* by using the required functions.
- b) Identify the attack type.
- (3 marks)
- I. Any attack targeting the availability or stability of a network's DNS service.
- II. Shut down a machine or network, making it inaccessible to its intended users.
- III. That uses malicious SQL code for backend database manipulation to access information that was not intended to be displayed.
- c) What is CIA Triangle in internet security, Explain C, I, A.
- (6 marks)
- d) State five social media types you can find in WWW and explain the specialty of each by providing examples for each of them.
- (5 marks)

**Question 3****(30 Marks)**

- a) You need to create the below given HTML form and complete the following steps using CSS and JavaScript.

- i. Create the following HTML form.

(6 marks)

The image shows a simple HTML form titled "Pattern Checker". It contains two input fields, both labeled "Pattern" (Pattern 1 and Pattern 2) with a black background and white text. Below these fields is a single "Check" button with a black background and white text.

- ii. Do the following changes to the input fields by using inline CSS.

- First input field should have a pink background.
- Second input field should have a yellow background.

(4 marks)

- iii. Create a JavaScript function called as **matchPattern()** and implement the function body according to the given description.

Access the values that the user entered for **Pattern 1** and **Pattern 2** fields and check whether those two values are matching or not. Then call the function on the button ("Check") click event.

(12 marks)

- b) Write a JavaScript code segment to create the given array below with the relevant values.

**marks = [10, 55, 44, 78, 90, 65, 30, 80]**

Calculate the total marks and average marks of the given array. Print the total and the average marks.

(8 marks)

**Question 4** **(30 Marks)**

- a) Write a PHP program to create the given array and find the largest number in the array and print the value.

$\$n = [1, 12, 4, 7, 8, 3, 5, 11, 9, 10]$  (4 marks)

- b) Consider a scenario where you have been provided with a database named "Student\_db", containing a table named "StudentDetails" in the localhost. The database requires authentication with a username of "user" and a password of "std@100". Write the implementation for the " config.php " file that establishes a mysqli database connection object.

(3 marks)

- c) Construct the HTML code ("register.html") to display the below form. Your form method should be "post" and the action page name should be "registration.php".

(8 marks)

**Student Registration Form**

Student Details	
Faculty:	<input type="text" value="Computing"/>
Student Name:	<input type="text"/>
Gender:	<input type="radio"/> Male <input type="radio"/> Female
Mobile Number:	<input type="text"/>
E-mail:	<input type="text"/>
Address:	<input type="text"/>
<input type="button" value="Register"/>	

- d) Create a PHP file “registration.php” and complete it by adding the PHP codes for following requirements.

I. Import the above created configuration file (config.php).

(1 mark)

II. Capture all the user inputs submitted through the above created HTML Form (“register.html”) and send data in to “StudentDetails” table by using an insert query.

(10 marks)

*[Hint: Refer to the structure of the table (“StudentDetails”) is as below]*

Column Name	Data Type
Faculty	Varchar
Name	Varchar
Gender	Varchar
Mobile	Varchar
Email	Varchar
Address	Varchar

III. Create a file called “StudentDetails.php” and display the records from the table “StudentDetails”.

(4 marks)

**End of the Question Paper**