Sri Lanka Institute of Information Technology

B.Sc. Honours Degree in Information Technology

Specialized in Information Technology

Final Examination
Year 1, Semester 2 (2023)

IT1100 – Internet and Web Technologies

Duration: 2 Hours

November 2023

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) Explain what an e-commerce system is. Write two advantages and two disadvantages of e-commerce when considering **business owners**.

(6 marks)

b) Describe what is **DNS server** and what it does when it comes to web browsing.

(4 marks)

c) Describe the need of "**method**" and "**action**" attributes of the HTML **form** element. Differentiate the **GET** and **POST** form methods, giving examples of their use.

(10 marks)

Question 2   (20 Marks)

a) Explain the difference between Passive and Active intruders.   (4 marks)

b) Describe the terms Symmetric key cryptography and Asymmetric key cryptography.   (6 marks)

c) List down three actions that can be used to improve "Search Engine Optimization" in your HTML pages.

(3 marks)

d) Explain what a **cookie** is and state how to create a cookie which is having the name as **final** and the value as **exam** which expires in one month.

(4 marks)

e) Describe the usage of the **session_start()** function and explain what is a session.

(3 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)

```
┌─Simple Calculator──────────────────────┐
│                                         │
│   Number 1  [                      ]    │
│                                         │
│   Number 2  [                      ]    │
│                                         │
│   Operator :[                      ]    │
│                                         │
└─────────────────────────────────────────┘

[ Calculate ]
```

   ii.   Do the following changes to the button using Internal CSS. Create an **Id** called "**change**" and define the following styles under the created Id.

         • Font color into Green
    button's • ~~Paragraph~~ background color into Yellow
         • Font size into 28 px
         • Align the text to center

                                                            (4 marks)

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

       Access the values that the user entered for **Number 1 and Number 2** fields and perform the required mathematical operations based on the operator passed by the user for the **Operator** textbox. Then call the function on the button (**"Calculate"**) click event.

                                                            (12 marks)

b) Write a JavaScript code segment to create the below given array with the relevant numbers and print the largest number in the array **without** using any inbuilt functions in JavaScript.
   values = [1, 12, 4, 7, 8, 3, 5, 11, 9, 10]

                                                              (8 marks)

3

Question 4   **(30 Marks)**

a) Create an associative array called as **age** to store the Name and the Age of the below given students.

Name	Age
Anne	20
Harry	22
Emma	18
Smith	21

Print the values that stored in the array in the following format.   (4 marks)

Anne is 20 years old.
Harry is 22 years old.
Emma is 18 years old.
Smith is 21 years old.

b) Easy-Vehicle is an online vehicle reservation application which allows the customers to reserve Cars and Vans for a required time period. Build up the php code segment for the below requirements.

i. Consider a database named "vehicle_db" containing a table named "vehicle_booking" in the localhost. The database requires authentication with a username of "Admin23" and a password of "con@34#!". Write the implementation for the " config.php " file that establishes a mysqli database connection object.

                                                (3 marks)

ii. Construct the HTML code ("vehicleReservation.html") to display the below form. Your form method should be "post" and the action page name should be "vehicleRegistration.php".

                                               (12 marks)

Vehicle Reservation

Customer Information

Customer Name:

[   ]

Phone Number:

[   ]

Email:

[   ]

Pick up Address :

[   ]

Vehicle Information

Vehicle type:

[Car ▾]

Air Condition

◉ With AC ○ Without AC

Trip Duration

Start Date : [mm / dd / yyyy 📅]

End Date : [mm / dd / yyyy 📅]

[Submit]

iii.   Import the above created configuration file (config.php).   (1 mark)

iv.   Capture all the user inputs submitted through the above created HTML Form ("vehicleReservation.html") and send data in to "vehicle_booking" table by using an insert query.

[Hint: Refer to the structure of the table ("vehicle_booking") given below]   (10 marks)

Column Name	Data Type
Name	Varchar
Phone	Varchar
Email	Varchar
address	Integer
vehicleType	Varchar
airCondition	Varchar
startDate	Varchar
endDate	Varchar

End of the Question Paper