

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Electrical & Computer Engineering



Study Programme	: Bachelor of Software Engineering Honours
Name of the Examination	: Final Examination
Course Code and Title	: EEI3346 Web Application Development
Academic Year	: 2022/2023
Date	: 25 th May 2023
Time	: 0930-1230hrs
Duration	: 3 hours

General Instructions

1. This question paper contains **Four (04)** compulsory questions, Answer all questions.
2. Answers should be in clear handwriting.

Question 01 (Marks 25)

1. Web programming is sometimes called scripting. Explain the two broad categories of scripting with suitable examples. [04 Marks]
2. Explain why you must consider Copy Rights and Privacy Policies while working with web development and list at least two (02) disadvantages that may occur when you do not follow those rules. [06 Marks]
3. Hypertext is an electronic document where contents are connected using hyperlinks. Explain how Hypertext documents function with suitable diagrams. [05 Marks]
4. Explain the Open Systems Interconnection Model (OSI) and why it's important for networking. [05 Marks]
5. Web security is important to keep hackers and cyber thieves from accessing sensitive information. Describe what is SQL injection and how to prevent it. [05 Marks]

Question 02 (Marks 20)

1. Explore how web hosting services enable individuals and organizations to make their websites accessible to users worldwide [06 Marks]
2. Explore how domain names serve as unique identifiers for websites and play a crucial role in branding, credibility, and memorability [06 Marks]
3. Explore the various HTTP methods (GET, POST, PUT, DELETE, etc.) and their purposes in web communication. [08 Marks]

Question 03. (30 Marks)

1. Using JavaScript Loop (for / while) write a program to calculate the counts of even numbers when the starting and ending numbers are given by the user. (Ex: Start No:1, End No:8, Counts of Even number : 4) [08 Marks]
2. You are requested to convert the following to XML snippets. [10 Marks]

```

{
  "library": {
    "book": {
      "title": "Intelligent XML Search",
      "editor": "Henk A. Blanken et al.",
      "publisher": "Springer Verlag"
    },
    "journal": {
      "title": "ACM Transactions on Databases",
      "volume": {
        "#text": "24",
        "number": 1
      }
    },
    "misc": {
      "author": "U. Known",
      "title": "The Diploma thesis that didn't appear",
      "year": 2002,
      "pages": 0
    }
  }
}

```

3. Answer the following questions.
 - a) Briefly explain the advantages of E-Commerce received by Customers and Organizations [04 Marks]
 - b) Cloud computing is a way of providing shared computing resources. List four (4) key features of cloud computing. [04 Marks]
 - c) Mention four (04) tips to reduce the load time of a web application you have written. [04 Marks]

Question 04 (25 marks)

1. Write an HTML snippet to create the given form with the information shown below. Both headings should be in Dark blue and the form background in Grey.

[10 Marks]

Personal Details

Password:
 E-mail id:
 Gender: Male Female Others
 Contact#:
 Name:

Educational Qualification

Degree:
 Engineering:

Hobbies: Playing chess Reading Books Others

Address

Attach Resume: No file chosen

2. Clearly explain the **Element selector**, **Class selector**, and **ID selector** with suitable examples. [06 Marks]
3. Write a **VueJs function** to display the grades for the given marks. (User need to enter the marks, marks 80 and above – grade A, marks between 65 and 79 – grade B, marks between 50 and 64 – grade C, marks <=49 – grade R) [05 Marks]
4. Discuss how Vue.js, as a front-end framework, can enhance the user experience and interactivity of SAP applications [04 Marks]