



VIT

Vellore Institute of Technology
(Established in 1984, Accredited by AICTE, ISO 9001:2015)

REG.NO.:

SCHOOL OF COMPUTER SCIENCE ENGINEERING AND INFORMATION SYSTEMS
CONTINUOUS ASSESSMENT TEST - II
WINTER SEMESTER 2024-2025

SLOT: D2+TD2

Programme Name & Branch : B.Tech, Information Technology
Course Code and Course Name : BITE 304L, Web Technologies
Faculty Name(s) : Dr.Vijayan R, Dr.Vijayarani A & Dr.Balasubramani M
Class Number(s) : VL2024250503427, VL2024250503433 & VL2024250503420
Date of Examination : 19-03-25, FN
Exam Duration : 90 minutes **Maximum Marks: 50**

General Instruction(s):

- Answer All Questions
- M - Max mark; CO - Course Outcome; BL - Blooms Taxonomy Level (1 - Remember, 2 - Understand, 3 - Apply, 4 - Analyse, 5 - Evaluate, 6 - Create)
- Course Outcomes:
CO2: Use JavaScript and JQuery to create dynamic web pages.
CO3: Formulate web applications that employ the MVC architecture and integrate Client and Server using the AJAX.
CO4: Exhibit the working of server-side scripts and open-source databases

Q. No	Question	M	CO	BL
1.	Assume that a student registration form to capture the student's name, register number, date of birth, programme, email id, permanent address, temporary address and phone number. Write only the JavaScript code to Validate the below criteria to ensure the smooth submission of form data to server side. a. The <u>mobile number</u> should be exactly 10 digits. b. <u>Register numbers</u> should have alphabets and numbers only. Should not exceed 9 characters. c. The <u>name</u> should not exceed 30 characters and can be only alphabets. d. Validate Email for its correctness. e. Provide a check box labelled as " <u>Permanent address</u> is same as Temporary address". If checked display the non-editable temporary address fields with the same value typed in Permanent Address, else display editable temporary address field. f. On successful validation of all the above criteria, display success message in Alert box, otherwise display error message in HTML.	10	2	3
2.	Write a HTML program to get a sentence as input which allows only alphabets and space, min length, max length along with a button to call JQuery function which does the following. a. Find the palindrome ' words ' with irrespective of case. b. Display the palindrome words as list. Every odd palindrome to be displayed with the grey background color. c. List the palindrome words whose length is between the min and max length d. If lengths are not mentioned, list all palindromes. e. If only the min length is mentioned, then the minimum length of the palindrome should be the provided min length. f. If only the max length is mentioned, then the maximum length of the palindrome should be the provided max length.	10	2	3

Refer the sample screen shot:



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Palindrome Finder!

Phrase:

Palindrome Length Min: Max:

Mam
I
did
sTats
sexEs
Civic
raceCar

If min= 3 & max = 5, then **Mam, did, sTats and Civic** are to be displayed. If min=5 then **sTats, Civic and raceCar** are to be displayed. If max=3 then **Mam,I and did** are to be displayed.

3. Assume that a JSON file contains **"students"** data as shown here:

```
{
  "prg": "BTECH",
  "year": 4,
  "students": [
    { "regnum": "21BIT0001", "cgpa": 8.0 },
    { "regnum": "21BIT0002", "cgpa": 9.5 }
  ],
  "prg": "MTECH",
  "year": 2,
  "students": [
    { "regnum": "21MIT0001", "cgpa": 5.2 },
    { "regnum": "21MIT0002", "cgpa": 9.3 },
    { "regnum": "21MIT0003", "cgpa": 5.3 },
    { "regnum": "21MIT0004", "cgpa": 7.5 }
  ]
}
```

It contains data for BTECH, MTECH, MCA, MBA, BCA and BSC programs. The JSON file has keys like prg, year and students(array of objects). Write a AJAX and JavaScript program which collects the program name through drop down and cgpa through text box along with a button which calls a function for click event. Write the function to display the student details who is studying in the selected program and having, more than or equal to the given cgpa.

4. Write Node JS with express middleware program to upload a file. The file must be pdf and size should be less than or equal to 2MB. The root page should display the form which contains a file input and a button to upload. Finally, display the status of file upload.

5. Assume that database classdb contains the collection "employee". Structure of employee is employee id, name, age, basic pay, and department. List the department name through drop down with a submit button. Let the user chooses a department name and clicks the submit button. The selected department employee details to be displayed in HTML table as shown here. Calculate the gross salary as basic pay+ HRA (10% of basic pay). Write a program in NodeJS with express and Mongoose to solve this.

Employee Id	Name	Age	Basic Pay	Gross Salary	Department
101	Sharath	28	25000	27500	Sales
102	Mahi	35	30000	33000	Accounts
103	Pavani	27	28000	30800	Marketing