

Reg. No.:

Name :



VIT
Vellore Institute of Technology

Continuous Assessment Test (CAT – I) – August 2024

Programme	: MCA (Master of Computer Applications)	Semester	: Fall Semester 2024-25
Course	: Full Stack Web Development	Code	: PMCA601L
		Class Nbr	: CH2024250103068
Faculty	: Dr. Sandhya P	Slot	: AI+TA1
Time	: 1 ½ hours	Max. Marks	: 50

Answer all the Questions

1.

As a web developer you are assigned the task of developing a webpage using HTML to display the availability of slots in a parking lot for a famous restaurant. The table is expected as follows:

- ✓ Write appropriate HTML code to design the table. (6 marks)
- ✓ Change the background color of the last three rows to green. (1 mark)
- ✓ Group the table header, body and footer with appropriate tags. (3 marks)

Car Parking Slot Availability

Slot Number	Vehicle Number	Duration (Hours)	Status
1	ABC123	3	Occupied
2	XYZ456	2	Occupied
3	LMN789	1	Available
4	OPQ012	5	Occupied
5	N/A	N/A	Available
Total Slots			5
Occupied Slots			4
Available Slots			1

10

2.

Ms. Sunitha Williams is fond of teaching her students about planets. To make the content interesting she approaches you to design a webpage as follows using HTML and CSS:

- ✓ The main title "Explore the planets of our solar system" must be in red color and centred to the webpage.
- ✓ Each planet section must have div that contains h2 and paragraph to describe it. Provide shared styling for each of the div such that its border is in blue color, and has curved border.

10

- ✓ The styles for h2 inside each div specifying the name of the planet must be in blue color.
- ✓ When you hover the cursor over the divs the background color of the div must change to green.

For the above scenario design a web page using HTML (4 marks), use appropriate selectors including id, class, contextual and pseudo (2 marks) and write and link the external CSS code to HTML (4 marks)

Explore the Planets in Our Solar System

Mercury

Mercury is the closest planet to the Sun.

Venus

Venus is the hottest planet in our solar system.

Earth

Earth is the only planet known to support life.

Mars

Mars is known as the Red Planet.

3.

Design a HTML and JavaScript text editor with the following features:

- ✓ A webpage with textbox to enter text and buttons called char count, word count and sentence count. The initial focus of the cursor must be auto simulated in the textbox. (2 marks)
- ✓ When char count button is clicked perform an event handling to alert the count of characters in the entered text using HTML attribute listener. (2 marks)
- ✓ When word count button is clicked alert the count of words in the entered text using appropriate DOM property event listener. (2 marks)
- ✓ When sentence count button is clicked two handlers handle1() and handle2() must be called consequently such that handle1 alerts "sentence count is:" and then handle2 alerts the count value. (4 marks)

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4.

Design a web form to fetch student details using HTML. The web form must fetch name, age and mobile of the student and have respective <div> for displaying error message. It must have an additional <div> to display the form details when data is entered correctly. The form must also have a submit button. (3 marks)

Using JavaScript and DOM perform validation such that on submission of the form the details must be displayed.

If there are validation errors the respective error message must be displayed inline to a <div> near each control and cleared when correct value is re-entered using DOM. (6 marks)

20

Expected Validation:

The form must have 3 textboxes to fetch name as English alphabets, age in range of 20-30 and mobile number as 10 digits and a submit button. (6 marks)

Add pseudo selectors such that the text boxes turn to red border when invalid data is entered by the user and back to default black when data is valid. (5 marks)

Form with no errors:

Student Details Form

Name:

Age:

Mobile:

Student Details:

Name: Kevin

Age: 23

Mobile: 1234567899

Form with validation errors:

Student Details Form

Name:

Name must contain only alphabets.

Age:

Age must be a number between 20 and 30.

Mobile:

Mobile must be a 10-digit number.

Form with first and third error corrected and error message cleared:

Student Details Form

Name:

Age:

Age must be a number between 20 and 30.

Mobile: