MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

II SEMESTER M. TECH (INTERNET OF THINGS)
END SEMESTER EXAMINATIONS APRIL 2024
INTERNET OF THINGS APPLICATIONS DEVELOPMENT (ICE5215)
Note: Answer All questions.

Time:3 Hours   **30-04-2024**   **MAX. MARKS: 50**

Instructions to Candidates:

❖ Answer **ALL** the questions.

Q.No.	Description	M	CO	PO'S	BL
1A	Differentiate semantic and non-semantic elements in HTML with examples of each.	3	1	1	2
1B	Describe the structure of an HTML document highlighting the purpose of each section.	3	1	1	2
1C	Develop an HTML code to create a simple webpage with the following elements: - Header with a title "My Portfolio" - Navigation bar with links to sections "About Me," "Skills," and "Projects" - Main content area with a brief description of yourself and your skills. - Footer with your contact information.	4	2	3	4
2A	Explain the concept of CSS selectors. List different types of selectors used in CSS.	3	2	1	2
2B	Build CSS code to achieve the following: - Change the background color of the body to light blue. - Set the font family of all headings (h1, h2, h3) to Arial. - Increase the font size of paragraphs (p) to 16px. - Add a 10px margin and padding to all elements with the class "content".	4	2	5	4
2C	Explain the box model in CSS bringing out the properties involved.	3	3	1	2
3A	Compare and contrast using inline styles, internal stylesheets, and external stylesheets.	3	3	1	4
3B	Develop a JavaScript code to achieve the following: - Alert a message "Welcome to my website!" when the page loads. - Change the background color of an element with the ID "main-content" on button click.	4	3	5	4

3C	Differentiate var, let, and const keywords used for declaring variables in JavaScript. Highlight the application where each of these are useful?	**3**	**3**	**1**	**3**
4A	Elaborate the concept of variables and data types in JavaScript. With suitable example code demonstrate different data types.	**3**	**3**	**1**	**3**
4B	Implement JavaScript code to construct a simple calculator that can perform addition, subtraction, multiplication, and division.	**4**	**4**	**3**	**3**
4C	Describe the different components available in the MIT App Inventor Designer. Give examples of how you would use each component in your app.	**3**	**4**	**1**	**2**
5A	Write a block code snippet in MIT App Inventor to achieve the following: • Display a welcome message on the screen when the app starts. • Change the background color of the screen when a button is clicked.	**3**	**4**	**1**	**3**
5B	Explain the concept of variables in App Inventor. How would you declare and use different data types of variables (e.g., numbers, text) in your app logic?	**3**	**4**	**1**	**3**
5C	Develop a block code snippet to create a simple game where the user taps the screen to make a character jump. Use procedures to separate the logic for character movement and collision detection.	**4**	**5**	**3**	**4**