CHRIST (Deemed to be University)
Department of Computer Science
MID TRIMESTER EXAMINATION – JULY 2025
PG I Semester

Programme Name: MCA **Max. Marks: 30**
Course Name: Full Stack Development **Time: 2Hrs**
Course Code: MCA 412-1

General Instructions

- Verify the Course code/Course title & number of pages of questions in the question paper.
- Make sure your mobile phone is switched off and placed at the designated place in the hall.
- Malpractices will be viewed very seriously.
- All programs are mandatory.
- After completion, students must upload the PDF and Source code to Google Classroom (GCR) and GitHub
- A single PDF file that includes: Screenshots of the executed outputs and the source code for each question (pasted or inserted clearly)
- A ZIP file containing all source code files (e.g., .html, .js, .css, .jsx, etc.)
- PDF and Zip file must be named using your Roll Number (e.g., 2547123.zip)

Course Outcomes (COs):

The students will able to

CO1: Apply HTML5 semantic features, Git for version control, and Tailwind CSS to develop structured and maintainable websites.
CO2: Analyze and debug server-side applications using Node.js, integrating MySQL to perform efficient CRUD operations and data management.
CO3: Implement Express.js and React.js in both frontend and backend to enable server-side rendering and static site generation.
CO4: Assess and optimize Next.js applications by leveraging server-side rendering (SSR) and static site generation (SSG) to enhance performance and SEO.
CO5: Evaluate web application performance, security, and scalability by implementing best practices in full-stack development and deployment.

Q. No	Questions	Marks	CO	RBT
1	Question 1: CoffeeHub Web App **Scenario:** You are developing a web app named **CoffeeHub** for coffee lovers to explore popular hot coffee drinks. The app should dynamically fetch coffee data, display their images and details, allow users to search by name, provide a feedback form, and store user preferences using Web Storage. It should also retrieve and display user location and browser information. (Mobile First Design) Submit the code on GitHub and GCR **Tasks:** **UI Design with Tailwind + Media + Form** Use **HTML5 semantic tags** and **Tailwind CSS** to create the layout: • A **navigation bar** with icons (home, coffee cup, contact) using **Font Awesome** • A **hero section** introducing "CoffeeHub" • An embedded **video** showing a brewing method with subtitles (VTT file should be there) (YouTube/local) • An **audio file** describing coffee types • A **form** collecting: Name, Email, Favorite Coffee • Use **JavaScript** to: Validate inputs (not empty, valid email) • Use **:hover** pseudo-classes for form styling	8	1,2	L3

	Fetch API + Display Coffee Items with Images + Search
	
	Use the following API: 🔗 https://api.sampleapis.com/coffee/hot
	
	• Fetch and display the first **8 coffee items**
	  ○ For each item, show in a styled :Coffee Name (title), Description (description), Image (image)
	  ○ Ingredients (as a comma-separated list)
	• Add a **search box** with a button:
	  ○ On button click, **filter and display** only coffees where the title includes the search term (case-insensitive)
	  ○ On dropdown sort the items in ascending and descending order based on Coffee Name
		10	2,3	L3, L4, L6

	JavaScript + Web Storage + Geolocation • On form submit:Store the **user name** and **favorite coffee** in localStorage or sessionStorage On reload, greet the user with a message like: "Hello, [Name]! You Love [Coffee Name]." • Use the **Geolocation API**: o On page load, ask for location permission o If granted, display user's latitude and longitude	8	1,2,3	L3, L6
	Responsiveness + Pseudo-Selectors • Make the site **responsive** using Tailwind's sm:, md:, lg: utilities • Apply pseudo-selectors to: o Highlight input fields with :focus o Change button style on hover with :hover	4	1,2,3	L3.L6