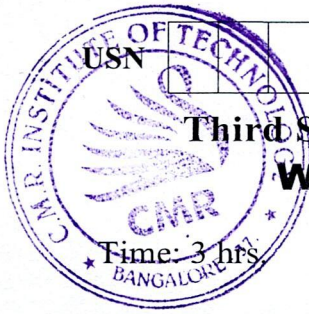


CBCS SCHEME



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MMCB311A

Third Semester MCA Degree Examination, Dec.2025/Jan.2026 Web Development using Full Stack Open

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks, L: Bloom's level, C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	What is an HTML form? List any five form input types.	10	L1	CO1
	b.	Define JavaScript variable. Mention any five data types.	10	L1	CO1
OR					
Q.2	a.	Write the basic structure of an HTML document.	10	L1	CO1
	b.	What is an external CSS file? Write any five advantages of using it.	10	L1	CO1
Module – 2					
Q.3	a.	What is React? List any four benefits of using React.	5	L1	CO2
	b.	Explain JSX. How is it different from HTML?	7	L2	CO2
	c.	Create a simple React functional component to display a welcome message.	8	L3	CO2
OR					
Q.4	a.	Define React Hook. List any four commonly used hooks.	5	L1	CO2
	b.	Explain useState Hook with a small example.	7	L2	CO2
	c.	Demonstrate the use of useEffect hook for fetching or updating data.	8	L3	CO2
Module – 3					
Q.5	a.	Explain the architecture of Node.js with a neat diagram.	10	L2	CO3
	b.	Write steps to install npm packages and explain how package.json is generated.	10	L3	CO3
OR					
Q.6	a.	What is MongoDB? Explain NoSQL database concepts and benefits.	10	L2	CO3
	b.	Write the CRUD operations in MongoDB with syntax using MongoDB Shell or Mongoose.	10	L3	CO3
Module – 4					
Q.7	a.	What is full-stack development? Explain its structure with client and server roles.	10	L2	CO4
	b.	What is JSON? Explain serialization and parsing with examples.	10	L2	CO4
OR					
Q.8	a.	Define authentication and authorization. Write differences between them.	8	L2	CO4
	b.	Explain JWT structure (Header, Payload, Signature) and how it is used in user authentication.	12	L3	CO4
Module – 5					
Q.9	a.	What is CI/CD? Explain continuous integration and continuous deployment cycle.	10	L2	CO5
	b.	Explain how GitHub Actions can automate build and test workflows with a simple example.	10	L3	CO5
OR					
Q.10	a.	What is Docker? Explain images, containers, and containerization benefits.	10	L2	CO5
	b.	Write the steps to deploy a Node.js backend application using Docker.	10	L3	CO5

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