



K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

WINTER-2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:II
Class:PG-I	Program:MCA
Branch Code:M.C.A.	Pattern:2022
Name of Course:Advanced Web Technology	Course Code:MCA222004
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains two page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Marks CO

Question No. 1

- 1a) Explain the difference between let, const, and var with suitable examples demonstrating their scope and usage. (6) CO1

Question No. 2

- 2a) Discuss the role and functionalities of the Node Package Manager (NPM) in Node.js development. (6) CO2

Question No. 3

- 3a) Demonstrate the use of Postman to test ExpressJS API endpoints by applying different HTTP methods and show how responses are interpreted during API development. (8) CO3

OR

- 3b) Apply ExpressJS features to design RESTful services and illustrate how REST principles are used while structuring API endpoints. (8) CO3

- 3c) Illustrate the workflow of ReactJS by applying its component-based architecture and demonstrate how this architecture improves application development. (8) CO3

OR

- 3d) Differentiate between containers and components by applying them in a ReactJS application. (8) CO3

Question No. 4

- 4a) Apply ReactJS forms and UI elements to handle user interactions and demonstrate their role in building dynamic and responsive user interfaces. (8) CO4

OR

- 4b) Illustrate the advantages and scope of ReactJS in modern web development and apply performance optimization concepts to justify why ReactJS code is efficient. (8) CO4

- 4c) Demonstrate the ReactJS workflow by applying its component-based architecture and show how it enhances application development. (8) CO4

OR

- 4d) Apply environment variables and Nodemon in an ExpressJS application setup and demonstrate how they improve development efficiency and configuration management. (8) CO4

Question No. 5

- 5a) Apply your knowledge to perform MongoDB CRUD operations and demonstrate how it simplifies database interaction. (8) CO5

OR

- 5b) Demonstrate the use of MongoDB Compass in database development and apply its features to understand MongoDB concepts and manage data visually. (8) CO5

- 5c) Apply Firebase operations to read, write, and query data, and demonstrate how these operations support real-time application development. (8) CO5

OR

- 5d) Apply Firebase development environment settings, authorization, and validation rules to demonstrate secure and controlled data access. (8) CO5

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