



RAN-2111000607010001

M.Sc. (IT) (Sem.- VII) Examination November - 2025

Application Development using Fullstack (Paper - 701)

Time: 3 Hours]

[Total Marks: 70

સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book

Seat No.:

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Student's Signature

Q.1. Answer the following. [14]

1. Differentiate between dependencies and devDependencies in package.json.
2. Write the use of EventEmitter class in Node.js
3. What is the difference between res.send() and res.json() methods?
4. Explain how error-handling middleware works in Express.js. Write its function signature.
5. Explain use of helmet in express.
6. Explain reconciliation in React.
7. Differentiate JavaScript and Typescript.

Q.2. Answer the following. (Any TWO) [14]

1. What is backend application development? Analyze its role and tasks involved in fullstack architecture.
2. Explain the Node.js architecture. How does its event-driven, non-blocking I/O model work, and why is it suitable for scalable applications?
3. Discuss how Node.js handles file system operations. Compare synchronous and asynchronous methods and explain when each should be used.

Q.3. Answer the following in detail. (Any TWO) [14]

1. Explain the best practices for securing Express.js applications.
2. Analyze the use of mongoose schema along with data types and other features with suitable example code.
3. Design an express application of form validation using express-validator. Form fields are username, email and password.

Q.4. Answer the following in detail. (Any TWO) [14]

1. How to create and deploy a package in node.js? Explain with code.
2. Design and develop a react app to demonstrate props.children with suitable examples.
3. Write a note on React, its features and explain virtual dom.

Q.5. Answer the following in detail. (Any TWO) [14]

1. Explain use of any three developer tools in a browser.
2. Explain websocket alongwith its applications and basic usage in nodejs.
3. Explain use Navigate() and useParams() hooks in React.js with necessary examples and code.