

# Node.js Question Bank with Answers (Final Version)

## 1 Mark Questions

**Q:** Why is Node.js?

**A:** Node.js ek JavaScript runtime hai jo server-side applications banane ke liye use hota hai.

**Q:** What is NPM?

**A:** NPM ek package manager hai jo Node.js libraries install aur manage karta hai.

**Q:** What is an Event Loop in Node.js?

**A:** Event Loop async tasks ko manage karke non-blocking execution deta hai.

**Q:** What are the two types of API functions in Node.js?

**A:** Node.js me Blocking aur Non-Blocking API functions hote hain.

**Q:** What is the package.json file?

**A:** package.json file project dependencies aur configuration store karti hai.

**Q:** What is a Mongoose?

**A:** Mongoose ek MongoDB object modeling library hai Node.js ke liye.

**Q:** How do you open a file in Node.js?

**A:** File ko fs module ka use karke open karte hain.

**Q:** What is JavaScript?

**A:** JavaScript ek programming language hai jo mainly web development me use hoti hai.

**Q:** What is REPL in Node.js?

**A:** REPL ek interactive shell hai jisme Node.js commands run kiye jate hain.

**Q:** What is a callback function in Node.js?

**A:** Callback function ek function hai jo kisi task ke complete hone ke baad chalti hai.

**Q:** Why is ExpressJS used?

**A:** ExpressJS web applications aur APIs banane ke liye use hota hai.

**Q:** What is an Event Emitter in Node.js?

**A:** EventEmitter ek class hai jo events emit aur listen karne ke liye use hoti hai.

**Q:** What are the different types of HTTP requests?

**A:** GET, POST, PUT, DELETE sab HTTP request types hain.

**Q:** Explain MVC.

**A:** MVC ek architecture hai jisme Model, View aur Controller hota hai.

**Q:** Why is Node.js Single-threaded?

**A:** Node.js single-threaded hai taki async tasks efficiently handle ho sake.

**Q:** What does NPM stand for and what is its role?

**A:** NPM ka matlab Node Package Manager hai jo packages manage karta hai.

**Q:** What is the difference between GET and POST requests?

**A:** GET data retrieve karta hai, POST server par new data bhejta hai.

## 2 Mark Questions

**Q:** Write any two Applications of Node.js.

**A:** Node.js real-time chat apps aur streaming applications me use hota hai.

**Q:** What is an array? Explain with example.

**A:** Array ek data structure hai jo multiple values ko ek variable me store karta hai.

**Q:** What is a callback function? Explain.

**A:** Callback function ek function hai jo kisi task complete hone ke baad call hota hai.

**Q:** What is the buffer class in Node.js?

**A:** Buffer class binary data ko handle karne ke liye use hoti hai.

**Q:** Write a short note on EventEmitter Class in Node.js.

**A:** EventEmitter events ko generate aur handle karne ke liye use hoti hai.

**Q:** Explain Error Handling in Express JS.

**A:** Express me error handling middleware functions se hota hai.

**Q:** Write a note on REPL Commands.

**A:** REPL commands quick testing aur debugging ke liye use hote hain.

**Q:** Explain readFile() and writeFile() function in Node.js.

**A:** readFile() file read karta hai aur writeFile() file me data likhta hai.

## 4 Mark Questions

**Q:** Create web servers in Node.js to find the addition of two numbers.

- Node.js me HTTP module use karke web server banate hain.
- Server request aur response handle karta hai.
- URL query se do numbers input lete hain.
- Server unka sum calculate karke response me send karta hai.

**Q:** How do you install and use NPM? Explain with example.

- NPM Node.js ka default package manager hai.
- Install karne ke liye command: npm install package-name.
- Dependencies automatically manage karta hai.
- Example: npm install express se ExpressJS install hota hai.

**Q:** Explain How to create a Local module in Node.js with an example.

- Local module ek custom module hota hai jo user define karta hai.
- Ek file me function export karte hain.
- Dusre file me require() se import karte hain.
- Is tarah se reusable code ban jata hai.

**Q:** Explain in detail with example Async/Await.

- Async/Await asynchronous code likhne ka tarika hai.
- Async function promise return karta hai.
- Await keyword promise ke resolve hone ka wait karta hai.
- Code readable aur synchronous jaisa lagta hai.

**Q:** How would you connect a MongoDB database to Node.js? Explain.

- MongoDB ko connect karne ke liye mongoose ya MongoClient use karte hain.
- Connection string MongoDB server ka address hota hai.
- Connect hone ke baad database operations perform kiye jate hain.
- CRUD operations easy aur fast hote hain.

**Q:** Create a node.js file that select all records from customers table and delete the specified record.

- Database connect karne ke liye MySQL ya MongoDB module use karte hain.
- SELECT query se saare records fetch karte hain.
- DELETE query se specified record remove karte hain.
- fs aur db libraries ka use karke file aur DB manage hota hai.

**Q:** Explain readFile() and writeFile() function in Node.js.

- readFile() asynchronous function hai jo file ka data read karta hai.
- writeFile() file me data likhta hai ya replace karta hai.
- Dono fs (file system) module ka part hain.
- Ye non-blocking hote hain aur callback ya promises use karte hain.

**Q:** How to create and access web servers in Node.js? Explain.

- HTTP module import karke server create karte hain.
- Server request listen karta hai aur response send karta hai.
- Port number specify karke client connect hota hai.
- Server se web pages aur API responses deliver hote hain.

**Q:** What is a promise in JavaScript? Explain with example.

- Promise ek object hai jo future value ya error ko represent karta hai.
- Ye async operations handle karne ke liye use hota hai.
- Promise states: Pending, Fulfilled, Rejected.
- Example: fetch() function ek promise return karta hai.

**Q:** What is Module? Explain different types of module in Node.js.

- Module ek independent file ya block of code hai jo reuse hota hai.
- Node.js modules types: Core, Local, Third-party.
- Core modules Node.js ke sath aate hain (fs, http).
- Local user-defined hote hain aur third-party NPM se install hote hain.

**Q:** Explain Express JS Applications and advantages.

- Express ek framework hai jo Node.js web apps banane me help karta hai.
- Routing aur middleware easy banata hai.
- API development fast aur scalable hota hai.
- Large community aur support available hai.

**Q:** Create web servers in Node.js to find Factorial of the number.

- HTTP module se server banate hain.
- URL query se number input lete hain.
- Factorial calculate karne ke liye loop ya recursion use karte hain.
- Result response ke through client ko bhejte hain.

**Q:** How can we use async await in node.js? Explain.

- Async await promises ko handle karne ka easy way hai.
- Async function hamesha promise return karta hai.
- Await keyword promise ke result ka wait karta hai.
- Code clean aur error handling simple ho jata hai.

**Q:** Describe the key features and benefits of using Express.js.

- Express routing aur middleware ko easy banata hai.
- Fast aur lightweight framework hai.
- REST APIs banana simple hota hai.
- Cross-platform aur scalable hai.