# Randomly Selected Questions - Set 3

**Question 1 (ID: 5.4.9):** Short Answer: What does the Access-Control-Allow-Origin header indicate in a CORS response?

**Question 2 (ID: 8.2.4):** Multiple Choice: When creating a Mongoose model, what is the significance of the model's collection name being singular?  
- (A) It is a requirement of the mongoose module.  
- (B) Mongoose automatically uses collections that are the plural of the model name.  
- (C) It helps in maintaining the capitalization format.  
- (D) It has no significance.

**Question 3 (ID: 6.2.4):** Multiple Choice: What does the command `node hello.js` do?  
- (A) Compiles the hello.js file  
- (B) Executes the hello.js file as a Node.js application  
- (C) Opens hello.js in the Node.js editor  
- (D) Deletes the hello.js file

**Question 4 (ID: 8.7.6):** Fill in the Blank: The MongoDB command to delete a database is \_\_\_.  
- Answer: db.dropDatabase()

**Question 5 (ID: 5.4.5):** Multiple Choice: Which protocol is often utilized by RESTful web APIs for data transfer?  
- (A) FTP  
- (B) HTTP  
- (C) SMTP  
- (D) IMAP

**Question 6 (ID: 8.1.5):** Multiple Answers: Which of the following are BSON types in MongoDB? (Select all that apply)  
- (A) Integer  
- (B) String  
- (C) Array  
- (D) JSON

**Question 7 (ID: 5.4.4):** Short Answer: Why do third parties require API keys for their web APIs?

**Question 8 (ID: 6.3.2):** Fill in the blank: In order to install Express, the command used is \_\_\_\_\_\_\_.  
- (A) npm install express

**Question 9 (ID: 8.3.10):** Fill in the blank: To enable Cross-Origin Resource Sharing (CORS) in an Express application, you need to use the \_\_\_\_\_ middleware.

**Question 10 (ID: 8.2.2):** Fill in the Blank: To install a specific version of Mongoose that supports the syntax in the textbook material, use the command \_\_\_\_\_\_\_\_.

**Question 11 (ID: 8.4.9):** Multiple Answers: Which fields are required when sending a new song to the Music API with a POST request? (Select all that apply)  
- [\_] \_id  
- [X] title  
- [X] artist  
- [\_] genre  
- [X] releaseDate  
- [\_] popularity

**Question 12 (ID: 9.3.9):** Multiple Choice: Which part of the bcrypt hash string represents the salt value?  
- (A) The first part often represented by "2a"  
- (B) The cost factor, typically a number like "10"  
- (C) The encrypted password hash  
- (D) The string of 16-byte salt value encoded to 22 characters

**Question 13 (ID: 6.2.7):** Short Answer: How can a developer globally install the "nodemon" package using npm?

**Question 14 (ID: 5.1.6):** Multiple Answers: Which of the following HTTP request methods can be used to change or update an existing resource on the web server? (Choose all that apply)  
- (A) GET  
- (B) POST  
- (C) PATCH  
- (D) PUT  
- (E) DELETE

**Question 15 (ID: 5.4.8):** Multiple Choice: Which of the following HTTP request methods does JSONP support?  
- (A) POST  
- (B) PUT  
- (C) DELETE  
- (D) GET

**Question 16 (ID: 8.4.1):** Multiple Choice: What is the primary function of the Music API described in the content?  
- (A) Edit song lyrics  
- (B) Manipulate data in the server’s database  
- (C) Generate music playlists automatically  
- (D) Provide recommendations based on song popularity

**Question 17 (ID: 7.3.3):** Short Answer: What is the jQuery method used to trigger a function when the user clicks an HTML element?

**Question 18 (ID: 6.3.6):** Multiple Choice: What will the Express server return if a request is made to a non-existent file, like http://localhost:3000/bye.html?  
- (A) The content of hello.html  
- (B) A 404 status code  
- (C) A blank page  
- (D) A JSON error message

**Question 19 (ID: 9.1.1):** Multiple Choice: Which method is used to store a key/value pair in the localStorage?  
- (A) saveItem()  
- (B) setItem()  
- (C) storeItem()  
- (D) keepItem()

**Question 20 (ID: 9.1.6):** Multiple Answers: Which of the following URLs represent different origins? (Choose all that apply)  
- (A) http://example.com/  
- (B) http://www.example.com/  
- (C) https://www.example.com/  
- (D) http://www.example.com:8080/

**Question 21 (ID: 5.3.5):** Short Answer: Explain the purpose of the `encodeURIComponent` function in the Ajax request example.

**Question 22 (ID: 6.2.5):** Fill in the blank: In a Node.js application, the \_\_\_\_\_\_\_\_\_\_ module is required to create a simple web server.  
- Answer: http

**Question 23 (ID: 7.5.10):** Short Answer: What is the jQuery method for wrapping an existing DOM element with a new element?  
- `wrap()`

**Question 24 (ID: 8.3.4):** Short Answer: What is the function of the express.Router class in creating a web API using Express?

**Question 25 (ID: 5.1.2):** Multiple Choice: What primarily distinguishes HTTP/3 from HTTP/2?  
- (A) HTTP/3 uses TCP for data transfer.  
- (B) HTTP/3 uses UDP for data transfer.  
- (C) HTTP/3 is more secure than HTTP/2.  
- (D) HTTP/3 introduces a new method for caching data.

**Question 26 (ID: 6.3.3):** Short Answer: Which function is used to import the Express module in a Node.js application?

**Question 27 (ID: 6.2.1):** Multiple Choice: Which architecture allows Node.js to handle high loads effectively?  
- (A) Multi-threaded architecture  
- (B) Event-driven, non-blocking I/O architecture  
- (C) Client-server architecture  
- (D) MVC architecture

**Question 28 (ID: 9.2.2):** Fill in the Blank: In token-based authentication, the server provides a \_\_\_\_\_\_\_ to the client upon successful authentication, which is used for future requests.

**Question 29 (ID: 5.5.5):** Multiple Choice: In JavaScript, which type of error is thrown when a variable or parameter is not the expected data type?   
- (A) RangeError   
- (B) SyntaxError   
- (C) TypeError   
- (D) ReferenceError

**Question 30 (ID: 9.3.2):** Multiple Choice: Which of the following is NOT a cryptographic hash function?  
- (A) MD5  
- (B) bcrypt  
- (C) AES  
- (D) SHA-1

**Question 31 (ID: 8.6.7):** Short Answer: What format does the Weather API return data by default?  
- Answer: JSON format.

**Question 32 (ID: 5.5.3):** Multiple Choice: What is the primary purpose of a try-catch statement?   
- (A) To optimize loop execution   
- (B) To execute code only if no errors are present   
- (C) To catch and handle exceptions in the code   
- (D) To declare variables globally

**Question 33 (ID: 8.3.5):** Multiple Choice: What does the following cURL command do? `$ curl http://localhost:3000/api/songs`  
- (A) Sends a POST request to retrieve all songs  
- (B) Sends a DELETE request to remove all songs  
- (C) Sends a PUT request to update all songs  
- (D) Sends a GET request to retrieve all songs

**Question 34 (ID: 9.2.1):** Multiple Choice: What is the process of verifying a user’s identity in a web application known as?   
- (A) User authorization   
- (B) User authentication   
- (C) User verification   
- (D) User validation

**Question 35 (ID: 7.1.1):** Multiple Choice: What is jQuery primarily used for?  
- (A) Sending emails  
- (B) Manipulating server-side data  
- (C) Simplifying HTML document traversing and manipulation  
- (D) Building desktop applications

**Question 36 (ID: 8.5.2):** Multiple Choice: What is the correct HTTP status code when a POST request successfully adds a song to the database?  
- (A) 200 OK  
- (B) 201 Created  
- (C) 204 No Content  
- (D) 404 Not Found

**Question 37 (ID: 6.3.10):** Multiple Choice: When using 'app.use()' without a path, which requests does the middleware apply to?  
- (A) Only GET requests  
- (B) Only POST requests  
- (C) All requests  
- (D) No requests

**Question 38 (ID: 8.7.5):** Multiple Choice: In the POST endpoint '/lab/register', what will be the response if both zip and airQuality are provided?  
- (A) 200; {"response": "Success."}  
- (B) 201; {"response": "Data recorded."}  
- (C) 400; {"error": "Incomplete data."}  
- (D) 500; {"error": "Server error."}

**Question 39 (ID: 6.4.10):** Short Answer: Consider the Express app route middleware below. What would be the console output for a URL path `/users/jblack`?  
  
```javascript  
app.param("username", function(req, res, next, username) {  
 console.log("URL param:", username);  
 if (username === "jblack") {  
 req.user = { name: "Jack Black", username: username };  
 } else {  
 req.user = { name: "Unknown", username: username };  
 }  
 next();  
});  
  
app.get("/users/:username", function(req, res) {  
 res.send(`<h1>Profile for ${req.user.name}</h1>`);  
});  
```

**Question 40 (ID: 8.5.3):** Short Answer: What is the purpose of the 'contentType' field in a $.ajax() request when sending JSON data?

**Question 41 (ID: 7.4.9):** Multiple Choice: What easing function is used by default when not explicitly specified in the animate() method in jQuery?  
- (A) linear  
- (B) swing  
- (C) ease  
- (D) bounce

**Question 42 (ID: 6.4.1):** Multiple Choice: What object stores query string parameters in an Express application?  
- (A) req.params  
- (B) req.query  
- (C) req.body  
- (D) req.header

**Question 43 (ID: 8.6.4):** Multiple Answers: Why do third parties require an API key? Select all that apply.  
- (A) To identify who is using the web API  
- (B) To limit the number of requests made in a fixed time period  
- (C) To control user access to the website's HTML  
- (D) To charge a developer a fee for additional requests

**Question 44 (ID: 9.3.5):** Multiple Choice: When pgreen tries to log in with the password "OpenSesame", the hash value does not match the stored hash. What is the result?  
- (A) pgreen is granted access  
- (B) The password is updated in the database  
- (C) pgreen is denied access  
- (D) The username is marked as inactive

**Question 45 (ID: 5.5.8):** Short Answer: What does the following code output when executed?   
```javascript  
function test() {  
 try {  
 console.log("try");  
 throw "crash!!!";  
 } catch (exception) {  
 console.log("catch");  
 } finally {  
 console.log("finally");  
 }  
 console.log("after");  
}  
test();  
```   
- "try"   
 "catch"   
 "finally"   
 "after"

**Question 46 (ID: 8.5.1):** Multiple Choice: Which jQuery method is typically used for sending JSON-encoded data to a web API?  
- (A) $.get()  
- (B) $.post()  
- (C) $.ajax()  
- (D) $.load()

**Question 47 (ID: 7.1.5):** Multiple Choice: Which line of jQuery code correctly adds the "highlight" class to all <p> elements?  
- (A) $("p:highlight").addClass()  
- (B) $(".highlight").addClass("p")  
- (C) $("p").addClass("highlight")  
- (D) $("#highlight").addClass("p")

**Question 48 (ID: 5.4.6):** Multiple Answer: Which of the following reasons are why third parties limit the number of API requests? (Select two)  
- (A) To ensure server stability  
- (B) To prevent data theft  
- (C) To encourage more API usage  
- (D) To charge fees for additional requests

**Question 49 (ID: 8.2.6):** Short Answer: What does the 'save' method do in Mongoose, and when is it used?

**Question 50 (ID: 8.3.3):** Fill in the blank: A RESTful web API implements CRUD operations on resources using the mechanics of \_\_\_\_\_.

# Answers

**Answer to Question 1:** The Access-Control-Allow-Origin header indicates which origins are permitted to access the resource.

**Answer to Question 2:** (B) Mongoose automatically uses collections that are the plural of the model name.

**Answer to Question 3:** (B) Executes the hello.js file as a Node.js application

**Answer to Question 4:** db.dropDatabase()

**Answer to Question 5:** (B) HTTP

**Answer to Question 6:** (A) Integer, (B) String, (C) Array

**Answer to Question 7:** The API key helps identify who or what application is using the web API, and it helps limit the number of requests for maintaining performance and possibly charging for usage.

**Answer to Question 8:** (A) npm install express

**Answer to Question 9:** cors

**Answer to Question 10:** npm install mongoose@6.12.8

**Answer to Question 11:** [X] title, [X] artist, [X] releaseDate

**Answer to Question 12:** (D) The string of 16-byte salt value encoded to 22 characters

**Answer to Question 13:** npm install nodemon --global

**Answer to Question 14:** (C) PATCH, (D) PUT, (E) DELETE

**Answer to Question 15:** (D) GET

**Answer to Question 16:** (B) Manipulate data in the server’s database

**Answer to Question 17:** The on() method is used with "click" specified as the event.

**Answer to Question 18:** (B) A 404 status code

**Answer to Question 19:** (B) setItem()

**Answer to Question 20:** (B) http://www.example.com/ & (C) https://www.example.com/ & (D) http://www.example.com:8080/

**Answer to Question 21:** The `encodeURIComponent` function encodes special characters in a URL, ensuring that the query string is correctly formatted.

**Answer to Question 22:** http

**Answer to Question 23:** `wrap()`

**Answer to Question 24:** The express.Router class is used to create modular route callbacks for the web API endpoints.

**Answer to Question 25:** (B) HTTP/3 uses UDP for data transfer.

**Answer to Question 26:** require()

**Answer to Question 27:** (B) Event-driven, non-blocking I/O architecture

**Answer to Question 28:** token

**Answer to Question 29:** (C) TypeError

**Answer to Question 30:** (C) AES

**Answer to Question 31:** JSON format.

**Answer to Question 32:** (C) To catch and handle exceptions in the code

**Answer to Question 33:** (D) Sends a GET request to retrieve all songs

**Answer to Question 34:** (B) User authentication

**Answer to Question 35:** (C) Simplifying HTML document traversing and manipulation

**Answer to Question 36:** (B) 201 Created

**Answer to Question 37:** (C) All requests

**Answer to Question 38:** (B) 201; {"response": "Data recorded."}

**Answer to Question 39:** URL param: jblack

**Answer to Question 40:** It specifies the media type of the request being sent to the server, such as "application/json" for JSON data.

**Answer to Question 41:** (B) swing

**Answer to Question 42:** (B) req.query

**Answer to Question 43:** (A) To identify who is using the web API; (B) To limit the number of requests made in a fixed time period; (D) To charge a developer a fee for additional requests

**Answer to Question 44:** (C) pgreen is denied access

**Answer to Question 45:** "try" "catch" "finally" "after"

**Answer to Question 46:** (C) $.ajax()

**Answer to Question 47:** (C) $("p").addClass("highlight")

**Answer to Question 48:** (A) To ensure server stability, (D) To charge fees for additional requests

**Answer to Question 49:** The 'save' method in Mongoose is used to save a document to the MongoDB database. It is used when you want to persist a particular instance of a model to the database.

**Answer to Question 50:** HTTP