**HTML5**

**1.Which HTML5 element is used to create a clickable button that can contain text or other HTML elements?**

a) <button>

b) <clickable>

c) <input type="button">

d) <a href="#">

Correct Answer: a

**2.Which HTML5 attribute is used to specify a short hint that describes the expected value of an input element?**

a) placeholder

b) hint

c) label

d) description

Correct Answer: a

**3.Which HTML5 attribute is used to provide a text alternative for images for users with disabilities or when images cannot be displayed?**

a) alt

b) text

c) description

d) caption

Correct Answer: a

**4.Which HTML5 <script> tag attribute is used to indicate that the script should not be executed until the page has finished parsing and is used for non-blocking script loading?**

a) async

b) defer

c) type

d) src

Correct Answer: b

**5.Which HTML5 tag is used to define the structure of an HTML document and contains metadata about the document?**

a) <body>

b) <head>

c) <meta>

d) <article>

Correct Answer: b

**6.What is the primary purpose of using the class attribute in HTML?**

a) To define the primary content area of a web page

b) To create a link to another webpage

c) To specify the source URL of an external image

d) To group elements for styling and scripting purposes

Correct Answer: d

**7.Which of the following attributes is used to assign a specific identifier to an HTML element?**

a) name

b) class

c) identifier

d) id

Correct Answer: d

**8.Which of the following statements best describes the difference between semantic and non-semantic HTML tags?**

a) Semantic HTML tags are used for styling, while non-semantic HTML tags convey meaning about content.

b) Semantic HTML tags provide information about content's structure and meaning, while non-semantic HTML tags are used solely for layout and styling.

c) Semantic HTML tags and non-semantic HTML tags are interchangeable and can be used interchangeably in web development.

d) Semantic HTML tags are designed for scripting purposes, while non-semantic HTML tags are used for search engine optimization.

Correct Answer: b

**9.What is the primary purpose of the <!DOCTYPE> declaration in an HTML document?**

a) To define the page's title and meta information

b) To specify the character encoding used in the document

c) To link an external stylesheet to the HTML document

d) To define the document type and version of HTML being used

Correct Answer: d

**10.What is the primary purpose of the viewport meta tag in HTML?**

a) To specify the viewport dimensions of the web page

b) To set the viewport color mode for the document

c) To establish the viewport for dynamic content scaling

d) To control the presentation and behavior of a web page on different devices and screen sizes

Correct Answer: d  
  
 **CSS3**

**11.In CSS, which property is used to control the space between the content of an element and its border?**

a) margin

b) padding

c) border-spacing

d) spacing

Correct Answer: b

**12.What does the CSS box-sizing property control?**

a) The box shadow applied to an element

b) The layout of flex items within a container

c) How an element's total width and height are calculated

d) The size of an element's border

Correct Answer: c

**13.Which CSS property is used to create space between elements on a web page?**

a) border

b) margin

c) padding

d) spacing

Correct Answer: b

**14.In CSS, what is the purpose of the z-index property?**

a) To specify the element's display order within a flex container

b) To control the stacking order of elements on the z-axis

c) To set the position of an element within its parent container

d) To define the font size of text within an element

Correct Answer: b

**15.Which CSS property is used to control the positioning of an element within its containing element?**

a) position

b) flex

c) margin

d) padding

Correct Answer: a

**16.What is the purpose of the CSS flex property?**

a) To create space between elements

b) To control the order of elements within a flex container

c) To specify the font style of text

d) To define the behavior of a flexible box layout

Correct Answer: d

**17.What is the primary purpose of using media queries in CSS?**

a) To control the z-index of elements on a web page

b) To create complex layout structures with flexbox

c) To apply styles based on the device's screen size and characteristics

d) To define the font size and color for text elements

Correct Answer: c

**18.In CSS, what is the purpose of the margin: auto; property value?**

a) To center an element horizontally within its parent container

b) To add a margin to all sides of an element

c) To remove all spacing between elements

d) To control the display order of flex items

Correct Answer: a

**19.Which CSS property is used to define the size of an element's border?**

a) border

b) border-size

c) border-width

d) border-spacing

Correct Answer: c

**20.What is the default value for the CSS box-sizing property?**

a) border-box

b) padding-box

c) content-box

d) margin-box

Correct Answer: c

**Javascript**

**21.What is the purpose of destructuring in JavaScript ES6?**

a) To create a new array from an existing one

b) To split a string into multiple substrings

c) To unpack values from arrays and objects into distinct variables

d) To merge multiple objects into a single object

Correct Answer: c

**22.In JavaScript ES6, what does the async keyword indicate when used before a function declaration?**

a) The function will return a promise.

b) The function is a generator function.

c) The function is a decorator.

d) The function is a callback.

Correct Answer: a

**23.Which of the following array methods in JavaScript ES6 is used to create a new array with all elements that pass a test?**

a) map

b) filter

c) reduce

d) forEach

Correct Answer: b

**24.In JavaScript ES6, which of the following is an example of a template literal?**

a) `'Hello, ' + name + '! How are you?'`

b) `Hello, ${name}! How are you?`

c) `Hello, name! How are you?`

d) `Hello, {name}! How are you?`

Correct Answer: b

**25.Which JavaScript ES6 feature allows you to spread elements of an array or object into another array or object?**

a) expand

b) scatter

c) spread

d) split

Correct Answer: c

**26.What is the primary use of the ... operator in JavaScript ES6 when applied to an object?**

a) To merge two objects into a single object

b) To create a shallow copy of an object

c) To remove properties from an object

d) To spread the properties of one object into another

Correct Answer: d

**27.What is the primary purpose of the reduce method in JavaScript ES6?**

a) To remove elements from an array

b) To filter elements based on a condition

c) To apply a function against an accumulator and each element in the array

d) To loop through the array and execute a function on each element

Correct Answer: c

**28.In JavaScript ES6, what is the primary purpose of template literals?**

a) To define complex mathematical equations

b) To create dynamic strings with embedded expressions

c) To define HTML and XML documents

d) To declare global constants

Correct Answer: b

**29.Which JavaScript ES6 feature allows you to gather multiple values into an array or object?**

a) spread

b) collect

c) gather

d) rest

Correct Answer: d

**30.What is the role of the await keyword when used in an asynchronous function in JavaScript ES6?**

a) To pause the function's execution until a promise is resolved

b) To cancel the execution of the function

c) To stop the function from being asynchronous

d) To convert a function into a generator function

Correct Answer: a

**React**

**31.What is the primary purpose of functional components in React.js?**

a) To manage application state

b) To render UI based on props and state

c) To implement routing logic

d) To define global constants

Correct Answer: b

**32.In React.js, what are props used for?**

a) To update the state of a component

b) To manage routing and navigation

c) To pass data from a parent component to a child component

d) To define the structure of the virtual DOM

Correct Answer: c

**33.In React, how can you pass data from a parent component to a child component without explicitly drilling props through intermediate components?**

a) Using the useState hook

b) Using Redux for global state management

c) Using the Context API

d) You can't pass data from a parent to a child without prop drilling.

Correct Answer: c

**34.In React.js, which of the following statements accurately describes the useEffect Hook's purpose?**

a) To handle user interactions and form submissions

b) To optimize rendering performance of functional components

c) To facilitate server-side rendering for React applications

d) To perform asynchronous operations and manage side effects in functional components

Correct Answer: d

**35.What is the main purpose of React Routing in a React.js application?**

a) To manage application state

b) To define global constants

c) To create functional components

d) To handle client-side navigation and routing

Correct Answer: d

**36.In React.js, what does Redux primarily help manage?**

a) Component rendering

b) Routing and navigation

c) Application state

d) Virtual DOM rendering

Correct Answer: c

**37.When should you use the useState hook in React?**

a) To fetch data from a server.

b) To manage local component state within a functional component.

c) To define the structure of the virtual DOM.

d) To define routing and navigation.

Correct Answer: b

**38.In a React.js component, which Hook is commonly used to fetch data from an API?**

a) useData

b) useEffect

c) useRequest

d) useAPI

Correct Answer: b

**39.What is the main role of a Redux store in a React.js application?**

a) To define the state of a component

b) To manage client-side routing and navigations state

c) To keep and manage the application's global state

d) To manage component's State

Correct Answer: c

**40.In React.js, which Hook is used to access the Redux store and To perform actions?**

a) useSelector

b) useDispatch

c) useStore

d) useContext

Correct Answer: b

**Node and Express**

**41.Question: Which of the following is a core module in Node.js used for building web servers?**

a) fs

b) http

c) path

d) url

Correct Answer: b

**42. Which of the following is an advantage of using Node.js?**

a) It is a statically typed language

b) It is a compiled language

c) It has a large standard library

d) It has a non-blocking I/O model

correct Answer: d

**43. Which of the following is used to manage asynchronous operations in Node.js?**

A) callbacks

B) promises

C) async/await

D) all of the above

Answer: d)all of the above

**44.Question: Why is the npm init command used in Node.js development?**

a) To initiate a new Node.js runtime environment for a project

b) To install essential Node.js packages for a project

c) To create a new JavaScript file within the project directory

d) To initialize a new Node.js project and create a package.json file to manage project dependencies and configurations

Correct Answer: d) To initialize a new Node.js project and create a package.json file to manage project dependencies and configurations

**45.What does the \_\_dirname variable represent in Node.js, and how is it typically used?**

a) \_\_dirname indicates the path to the Node.js binary executable and is used for system-level operations.

b) \_\_dirname holds the current working directory of the Node.js process and is employed to manage process-related tasks.

c) \_\_dirname represents the directory of the currently executing script and is used to resolve file paths relative to that script.

d) \_\_dirname contains the path to the Node.js installation directory and is used to locate built-in modules.

Correct Answer: c) \_\_dirname represents the directory of the currently executing script and is used to resolve file paths relative to that script.

**46.Question: What types of applications can you build using Express.js?**

a) Only applications for controlling space probes and communication with extraterrestrial life

b) Solely applications for modeling complex ecosystems and predicting climate change

c) A wide range of web applications, including APIs, single-page applications, and server-rendered websites

d) Applications exclusively focused on optimizing shipping routes for cargo ships in the Arctic Circle

Correct Answer: c) A wide range of web applications, including APIs, single-page applications, and server-rendered websites

**47.Question: In Express.js, what is middleware?**

a) A type of router

b) A template engine

c) A function that processes requests and responses

d) An authentication library

Correct Answer: c) A function that processes requests and responses

**48.Question: In Express, what is the purpose of the app.use method?**

a) To start the server and listen for incoming requests

b) To render HTML templates

c) To specify the port for the application

d) To use middleware to process all incoming requests

Correct Answer: d) To use middleware to process all incoming requests

**49.Question: Which HTTP method is used for retrieving data from a server in Express?**

a) POST

b) GET

c) PUT

d) DELETE

Correct Answer: b) GET

**50.Question: In Express.js, what is the purpose of the next function in middleware?**

a) It generates a random number as a security token

b) It forcefully shuts down the application to prevent unauthorized access

c) It seamlessly transfers control to the next middleware function in the stack

d) It reroutes the request to a predefined fallback route for error handling

Correct Answer: c) It seamlessly transfers control to the next middleware function in the stack

**51.Question: In Express.js, what is the objective of the res.render method?**

a) To compile a webpage on the fly

b) To transmit a JSON retort

c) To document data within the console

d) To conclude server operations

Correct Answer: a) To compile a webpage on the fly

**52.Question: When handling an HTTP request in Express.js, what type of data is typically found in the req object?**

a) Information about the incoming request,such as headers, query parameters, and request body

b) Cryptographic keys used for secure data transmission during request.

c) A collection of middleware functions applied during the request

d) Information about the client's device, such as user agent and device ID

Correct Answer: a) Information about the incoming request,such as headers, query parameters, and request body.

**53.Question : How can you send a JSON response in an Express.js route handler?**

a) Use the sendJSON method

b) Set the Content-Type header to application/json

c) Use the route.json() method

d) Use the response.json() method

Correct Answer: d) Use the response.json() method

**54.Question: In Express.js, what is the primary purpose of the express.json middleware?**

a) It serves static files, such as HTML and CSS, to the client

b) It parses JSON data sent in the request body

c) It generates random JSON responses for testing purposes

d) It compresses the server's JSON responses to save bandwidth

Correct Answer: b) It parses JSON data sent in the request body

**55.Question: In Express.js, how can you set the HTTP status code for an HTTP response?**

a) Use the status(code) method on the request object

b) Include the status code as a query parameter in the URL

c) Utilize the status(code) method on the response object

d) Set the status code in the app.options configuration

Correct Answer: c) Utilize the status(code) method on the response object

**MongoDB**

**56. Dynamic schema in MongoDB makes \_\_\_\_\_\_\_\_\_\_\_\_ easier for applications.**

a) inheritance

b) polymorphism

c) encapsulation

d) none of the mentioned

Correct answer b)polymorphism  
  
**57. Point out the correct statement.**

a) MongoDB cannot be used as a file system

b) MongoDB can run over single servers only

c) Embedded documents and arrays reduce need for joins

d) None of the mentioned

Correct answer c) Embedded documents and arrays reduce need for joins

**58. Object\_Id is similar to \_\_\_\_\_\_\_\_\_ key in Relational Databases.**

a) primary

b) secondary

c) composite

d) all of the mentioned

Correct answer a) primary

**59. MongoDB stores all documents in \_\_\_\_\_\_\_\_\_\_\_\_\_**

a) tables

b) collections

c) rows

d) all of the mentioned

Correct answer b) collections   
  
**60. Which of the fields is reserved for use as a primary key?**

a) \_id

b) \_uid

c) \_uuid

d) All of the mentioned

Correct answer a)\_id   
  
**61.Which method is used to query documents in MongoDB and retrieve specific fields from them?**

a) find()

b) query()

c) get()

d) select()

Correct answer a)find()

**62.Which command is used to create a new database in MongoDB?**

a) create Database()

b) new Database()

c) use DatabaseName

d) db.createCollection()

Correct answer c) use DatabaseName

**63.What is the default port for MongoDB?**

a. 27017

b. 8080

c. 3306

d. 5432

Correct answer a) 27017

**64.In MongoDB, what is the "\_id" field type when using ObjectId?**

a. String

b. Integer

c. Object

d. Binary

Correct answer d) Binary

**65.In MongoDB, how can you efficiently insert multiple documents into a collection?**

a) Use the $insert operator with an array of documents

b) Execute multiple db.collection.insertOne() commands for each document

c) Utilize the db.collection.insertMany() method with an array of documents

d) Manually loop through the documents and insert each one separately

Correct Answer: c) Utilize the db.collection.insertMany() method with an array of documents

**REST Api**

**66.What does REST stand for in the context of web services and APIs?**

a) Representational State Transfer

b) Request for Enhanced Security Tokens

c) Remote Execution and Server Technology

d) Resource Endpoint Service Technology

Correct Answer: a

**67.Which HTTP methods are commonly used in RESTful APIs to perform create, read, update, and delete (CRUD) operations?**

a) POST, PUT, GET, DELETE

b) CREATE, READ, MODIFY, DELETE

c) SEND, RECEIVE, UPDATE, REMOVE

d) ADD, FETCH, ALTER, ERASE

Correct Answer: a

**68.What is the primary purpose of the HTTP GET method in a REST API?**

a) To create a new resource on the server

b) To update an existing resource on the server

c) To retrieve data from the server

d) To delete a resource from the server

Correct Answer: c

**69.In REST, what is the purpose of an API endpoint or URL?**

a) To specify the programming language used for the API

b) To identify the version of the API

c) To indicate the data format (e.g., JSON or XML) of the response

d) To represent a resource or a collection of resources

Correct Answer: d

**70.Which status code is typically returned in a REST API response to indicate that a resource was successfully created?**

a) 200

b) 201

c) 204

d) 404

Correct Answer: b

**71.What is the purpose of versioning in a REST API?**

a) To specify the programming language used for the API

b) To indicate the data format (e.g., JSON or XML) of the response

c) To ensure backward compatibility when making changes to the API

d) To create multiple endpoints for the same resource

Correct Answer: c

**72.Which HTTP method is commonly used in a REST API to update an existing resource?**

a) POST

b) PUT

c) PATCH

d) DELETE

Correct Answer: b

**73.What does the term "stateless" mean in the context of RESTful APIs?**

a) The API requires the client to maintain the session state

b) Each request from a client to the server must contain all the information needed to understand and process the request

c) The server stores the client's state for enhanced security

d) The API is only accessible from a single state or region

Correct Answer: b)

**74.What HTTP status code is typically returned in a REST API response when the requested resource is not found?**

a) 200

b) 404

c) 401

d) 500

Correct Answer: b

**75.What is the primary purpose of Cross-Origin Resource Sharing (CORS) in the context of RESTful APIs?**

a) To enable access to resources from any origin without any restrictions

b) To restrict access to resources and allow only same-origin requests

c) To enforce secure communication through HTTPS for all requests

d) To allow the server to define its own policies for permitting or restricting specific origins from accessing its resources

Correct Answer: d