DEV BHOOMI UTTARAKHAND UNIVERSITY

School of Engineering and Computing
(SOCSE)

Question Bank - Unit no.1		
Program: B.Tech		
Course Name: Advanced Web Technology	**Course Code21BTCS483**	
AcademiAcademic year:2023-2024	**Sem/Year: II/I**	
Level A. Easy Questions (2 marks each)		
S. No.	**Questions**	**CO***
Q1	What is Bootstrap, and how does it simplify web development?	CO1
Q2	Highlight three advantages of using Bootstrap for front-end development.	CO1
Q3	Explain the concept of a Bootstrap Container. Provide a real-world example of its usage.	CO1
Q4	What are the default Bootstrap text settings?	CO1
Q5	Write the code to create the textbox using HTML and create responsive using Bootstrap.	CO1
Q6	What is the Bootstrap Grid System, and how can it be utilized to create responsive layouts?	CO1
Q7	Explain the significance of Typography in Bootstrap.	CO1
Q8	Name three Bootstrap color classes and provide practical scenarios where each would be appropriately applied.	CO1
Q9	List three Bootstrap background color classes.	CO1
Q10	Demonstrate how to create a simple table using HTML and Bootstrap.	CO1
Q11	Bootstrap, explain how to round corners of an image.	CO1
Q12	Illustrate the use of Bootstrap alerts in a real-world scenario.	CO1
Q13	How to Create a Tooltip using Bootstrap?	CO1
Q14	Give the name of all classes of Bootstrap Grid system .	CO1

Q15	Highlight the key differences between Bootstrap 4 and Bootstrap 5	CO1
Q16	Define a ButtonGroup in Bootstrap and identify the class for a basic ButtonGroup.	CO1
Q17	Explain how to create a button in Bootstrap. Provide names for five different button.	CO1
Q18	What is a breadcrumb in Bootstrap, and how can it enhance user navigation?	CO1
Q19	How can Bootstrap be utilized to create and style thumbnails on a webpage?	CO1
Q20	Bootstrap, discuss the two codes used for displaying code snippets.	CO1
Q21	Explain the concept of a lead in Bootstrap.	CO1
Q22	Demonstrate the use of Dropdowns in Bootstrap.	CO1
Q23	Using HTML and Bootstrap, explain how to create an accordion.	CO1
Level B. Intermediate Questions (5 marks each)		
Q24	Create a webpage layout with a container and utilize the Bootstrap grid system to arrange three different sections side by side. Ensure responsiveness on various screen sizes.	CO1
Q25	Apply different typography styles to headings and paragraphs on a webpage. Change the background color of specific sections using Bootstrap color classes. Ensure the text is easy to read and visually appealing.	CO1
Q26	Design a table to display information using Bootstrap table classes. Integrate images into the table cells and implement responsive behavior for the table and images on smaller screens.	CO1
Q27	Create a webpage featuring multiple buttons using Bootstrap button classes. Implement functionality where clicking a button triggers an alert with a specific message. Style the alerts using Bootstrap classes.	CO1
Q28	Develop a dynamic page with Bootstrap progress bars. Illustrate their use in indicating loading or processing status.	CO1
Q29	Build a paginated list of items using Bootstrap pagination and list group components. Explain how these components aid in organizing and navigating through a set of content.	CO1
Q30	Create a form layout with Bootstrap form components, including various input types and input groups. Ensure the form is visually appealing and user-friendly.	CO1
Q31	Apply Bootstrap classes to create a webpage containing images. Ensure that all images have different shapes, utilizing Bootstrap's image styling options.	CO1
Q32	Build a card layout with an image, title, and description. Add a dropdown button to one of the cards containing various options. Demonstrate how to use Bootstrap to enhance card design and interactivity.	CO1

| Q33 | Develop a simple form with various input elements such as text fields, checkboxes, and radio buttons using Bootstrap form classes. Utilize input groups to enhance the form's visual appearance. Ensure proper validation for the form elements. | CO1 |

Level C. Difficult Questions (10 marks each)		
Q34	Design a navigation bar with a dropdown menu and demonstrate the use of the collapse component to hide and show content. Explain the importance of dropdowns and collapse in navigation.	CO1
Q35	Implement badges to display notification counts and include a progress bar on your page. Describe how badges and progress bars can enhance user experience.	CO1
Q36	Create a set of buttons and organize them into button groups. Apply different button styles and sizes. Explain how button groups are useful in UI design.	CO1
Q37	Design a table with alternating row colors and include images in some table cells. Demonstrate the use of Bootstrap classes for styling tables and images.	CO1
Q38	Apply different typography styles and colors to a Bootstrap page. Explain how to customize font sizes and colors using Bootstrap classes.	CO1
Q39	Implement a carousel to display a rotating set of images and include a modal for additional content. Describe the use cases for carousels and modals in web design.	CO1
Q40	Integrate tooltips and popovers into your webpage. Demonstrate how these components provide additional information and enhance user interaction. Explain the difference between tooltips and popovers.	CO1
Q41	Implement a navigation bar with Bootstrap navs and utilize the collapse component for a collapsible menu. Explain the benefits of using collapse in responsive design.	CO1

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Question Bank - Unit no.2		
Program: B.Tech		
Course Name: Advanced Web Technology	**Course Code:**	
21BTCS483 Academic year:2023-2024	**Sem/Year: II/I**	
Level A. Easy Questions (2 marks each)		
S. No.	**Questions**	**CO***
Q1	What is jQuery?	CO2
Q2	What are the features of jQuery?	CO2
Q3	Tell the JQuery Syntax.	CO2
Q4	Mention some advantages of jQuery.	CO2
Q5	What is jQuery?	CO2
Q6	Why JQuery is needed?	CO2
Q7	What is $() in jQuery library?	CO2
Q8	Is jQuery replacement of JavaScript?	CO2
Q9	Illustrate the term JQuery.	CO2
Q10	How to Call a jQuery Library Functions?	CO2
Q11	What are the JQuery Selectors? Give Some example.	CO2
Q12	What is term GET means?	CO2
Q13	Explain term SET in jQuery?	CO2
Q14	How to stop animation in jQuery Explain with example?	CO2

Q15	What is the difference between Fade and slide?	CO2
Q16	Write a code to hide all P element with click event?	CO2
Q17	What is events and event handling?	CO2
Q18	Expand term Sliding in JQuery in detail?	CO2
Q19	Explain different events used in jQuery?	CO2
Q20	What do you mean by animate function?	CO2
Q21	Write basic syntax of jQuery?	CO2
Q22	Where to add jQuery library in HTML document?	CO2
Q23	What steps need to be there for stop a animate fuction?	CO2
Level B. Intermediate Questions (5 marks each)		
Q24	Explain the key differences between JavaScript and jQuery, highlighting situations where using jQuery is advantageous.	CO2
Q25	Write JQuery code to select all paragraphs with a class of "content" and hide them.	CO2
Q26	Explain how to include the JQuery library in an HTML document and why it is beneficial for developers.	CO2
Q27	Differentiate between the functions fadeOut(), slideUp(), and animate() in JQuery.	CO2
Q28	Explain the purpose of the stop() function in JQuery and provide an example.	CO2
Q29	Explain what JQuery is and why it is commonly used in web development. Provide an example of a situation where JQuery can be beneficial.	CO2
Q30	Differentiate between text(), val(), addClass(), and removeClass() in JQuery, providing a simple example for each.	CO2
Q31	Explain how to include the JQuery library in an HTML document and discuss the advantages of using a CDN (Content Delivery Network) for JQuery.	CO2
Q32	Write a simple JQuery code snippet to select an element with the id "example" and change its text content to "Hello, JQuery!"	CO2
Q33	Expand term jQuery with its syntax and Application?	CO2

Level C. Difficult Questions (10 marks each)		
Q34	Demonstrate the use of a click event in JQuery. Provide an example where clicking a button triggers an alert message.	CO2
Q35	Write JQuery code to select all paragraphs with the class "highlight" and chain a method to hide them with a fade effect.	CO2
Q36	Compare and contrast JavaScript and JQuery, highlighting three key differences between the two.	CO2
Q37	Write a program in JQuery using Hide/Show effects.	CO2
Q38	Create a program to show the usage of fadein() or fadeout() effects.	CO2
Q39	Write the JQuery code to include the JQuery library from a CDN in an HTML document. Explain the significance of including the library in the <head> section versus the <body> section.	CO2
Q40	Write JQuery code to get the value of an input field with the ID "username," set it to "JohnDoe," and then remove the input field from the DOM.	CO2
Q41	Demonstrate the use of a click event in JQuery. Provide an example where clicking a button triggers an alert message.	CO2

Question Bank - Unit no.3		
Program: B.Tech		
Course Name: Advanced Web Technology	**Course Code:**	
21BTCS483 Academic year:2023-2024	**Sem/Year: II/I**	
Level A. Easy Questions (2 marks each)		
S. No.	**Questions**	**CO***
Q1	What are NoSQL databases?	CO3
Q2	What is Collection?	CO3
Q3	What is MongoDB?	CO3
Q4	What are Documents?	CO3
Q5	What are the different types of NoSQL databases?	CO3
Q6	What kind of NoSQL database MongoDB is?	CO3
Q7	Which are the most important features of MongoDB?	CO3
Q8	Which all languages can be used with MongoDB?	CO3
Q9	Compare SQL databases and MongoDB at a high level.	CO3
Q10	How is MongoDB better than other SQL databases?	CO3
Q11	Mention the command to insert a document in a database called school and collection called persons.	CO3
Q12	Does MongoDB provide a facility to do text searches? How?	CO3
Q13	Why are MongoDB data files large in size?	CO3
Q14	When should we embed one document within another in MongoDB?	CO3

Q15	What is the Difference between Data and Information?	CO3
Q16	Compare Schema and Instance?	CO3
Q17	Can you update collection in Mongo DB explain with example?	CO3
Q18	Can you drop a Collection in Mongo DB explain with Example?	CO3
Q19	What is the difference between Delete and Drop?	CO3
Q20	Why we use Object ID in Mongo DB?	CO3
Q21	Name any 5 Data types that we use in Mongo DB?	CO3
Q22	What do you Mean by Projection?	CO3
Q23	Write Syntax for Update a document?	CO3
Level B. Intermediate Questions (5 marks each)		
Q24	Create the Structure of 'restaurants' collection.Insert some data in the database .	CO3
Q25	Write a MongoDB command to insert a new document into the "Employees" collection with fields such as "name," "age," and "position." Include comments explaining the purpose of each field.	CO3
Q26	Write MongoDB commands to insert two documents into the "Students" collection. Ensure that each document contains at least three key-value pairs.	CO3
Q27	Explain MongoDB database with its advantages and disadvantages.	CO3
Q28	Demonstrate how to create a collection named "Employees" within the "Company" database. Also, provide MongoDB commands to drop this collection. Explain the significance of collections in MongoDB.	CO3
Q29	Briefly explain the purpose of the "ObjectId" field in MongoDB documents?	CO3
Q30	Write a MongoDB command to update the salary of an employee with the name "John Doe" in the "employees" collection. Explain the update operation you used.	CO3
Q31	Write MongoDB commands to create a new database named "Company" and another command to drop this database. Include comments in your code to explain each step.	CO3
Q32	List and briefly describe five different data types supported by MongoDB. Provide examples of scenarios where each data type might be used.	CO3
Q33	Can you explain the difference between "find" and "findOne" in Mongo DB with Example?	CO3

Level C. Difficult Questions (10 marks each)		
Q34	Write a program in Mongo DB to create a Database name as "Employee" & Collection name as "Teaching". Create a document Fields as EID, Name, Designation, Salary with 5 Enteries?	CO3
Q35	Explain the key features and advantages of MongoDB compared to traditional relational databases. How does MongoDB handle data storage differently, and in what scenarios is it particularly beneficial?	CO3
Q36	Discuss the various data types supported by MongoDB, including BSON data types. Provide examples of each data type and explain when it is appropriate to use them in a MongoDB document.	CO3
Q37	Explain the process of creating a collection in MongoDB. Provide a step-by-step guide to creating and dropping a collection using the MongoDB shell. What considerations should be taken into account when choosing collection names?	CO3
Q38	Write a MongoDB query to insert a document into a collection named "users" with fields for name, age, and email. Include an example document and explain how MongoDB handles the insertion of data.	CO3
Q39	Outline the steps for installing MongoDB on a Windows machine. After installation, demonstrate how to create a new database and drop an existing database using both the MongoDB shell.	CO3
Q40	Explain the difference between the deleteOne() and deleteMany() methods in MongoDB. Provide examples of using both methods to remove documents from the "users" collection based on a specified condition.	CO3
Q41	Write a program in Mongo DB to create a Database name as "Employee" &Collection name as "Teaching". Create a document Fields as EID, Name, Designation, Salary with 5 Enteries?	CO3

Question Bank - Unit no.4

Program: B.Tech
Course Name: Advanced Web Technology   **Course Code:**
21BTCS483 Academic year:2023-2024   **Sem/Year: II/I**

Level A. Easy Questions (2 marks each)

S. No.	Questions	CO*
Q1	Whatis AJAX?	CO4
Q2	Name two advantages of using AJAX in web development.	CO4
Q3	What are the disadvantages of AJAX?	CO4
Q4	Identify two real web applications currently running in the market that actively leverage AJAX.	CO4
Q5	Highlight two security issues associated with AJAX implementation.	CO4
Q6	Differentiate between synchronous and asynchronous AJAX requests.	CO4
Q7	Name Two technologies commonly used alongside AJAX in web development.	CO4
Q8	Define JSON and briefly explain its significance in AJAX.	CO4
Q9	Name two programming languages supported by JSON.	CO4
Q10	Highlight two differences between XML and JSON in the context of AJAX.	CO4
Q11	Explain briefly why JSON is used in AJAX applications.	CO4
Q12	Define JSON syntax used in AJAX applications.	CO4
Q13	Explain briefly the role of the callback function in AJAX.	CO4
Q14	Define JSON in the context of AJAX.	CO4

Q15	Name two tools for debugging AJAX applications.	CO4
Q16	Discuss briefly two types of postback in AJAX.	CO4
Q17	List two different readystates of a request in AJAX.	CO4
Q18	Name two common AJAX frameworks.	CO4
Q19	Highlight briefly the difference between JavaScript and AJAX.	CO4
Q20	Explain briefly the limitations of AJAX in web development.	CO4
Q21	Define JSONArray in the context of JSON used in AJAX applications.	CO4
Q22	Explain briefly how to determine that an AJAX request has been completed.	CO4
Q23	Define JSON object and explain its role in AJAX applications.	CO4
Level B. Intermediate Questions (5 marks each)		
Q24	What are AJAX objects and what is the syntax to create AJAX objects?	CO4
Q25	Explore different methods for passing parameters to the server in AJAX requests with example.	CO4
Q26	Illustrate the types of the `open()` method within the XMLHttpRequest object with example.	CO4
Q27	What are the types of send()method used for XML Http Request?	CO4
Q28	Elaborate on the purpose of XMLHttpRequest and provide a example showcasing its application in a web development scenario.	CO4
Q29	Explore the detailed properties of XMLHttpRequest.	CO4
Q30	Highlight the significant methods of XMLHttpRequest, Provide real-world examples.	CO4
Q31	Explain the different data types available in JSON and give examples illustrating their use in the context of AJAX communication.	CO4
Q32	What is JSON objects and how to declare JSON objects explain with example?	CO4
Q33	What is JSON arrays explain in detail with Syntax?	CO4

Level C. Difficult Questions (10 marks each)		
Q34	Briefly discuss about the AJAX technology, and can you provide real-world examples of its applications?	CO4
Q35	Explain what an AJAX request is, and could you demonstrate the process of initializing an object in AJAX with an example?	CO4
Q36	Break down the process of AJAX and provide a detailed explanation of how it works in real-world applications.	CO4
Q37	Discuss different types of object methods available in AJAX, and how are they used in AJAX applications?	CO4
Q38	Define JSON and elaborate on its purpose. In addition, highlight the differences between JSON and XML.	CO4
Q39	Create an Object for Request method in AJAX also explain object propertiesin detail?	CO4
Q40	Discuss various data types used in JSON, providing in-depth explanations and give examples for each type. Illustrate how these data types are commonly employed in AJAX communication.	CO4
Q41	Describe the following terms:- 1. Synchronous&Asynchronous 2. GET& POST Method 3. AJAXRequest& Response 4. JSONObjects 5. ObjectMethods	CO4

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Question Bank - Unit no.5		
Program: B.Tech		
Course Name: Advanced Web Technology	**Course Code:**	
21BTCS483 Academic year:2023-2024	**Sem/Year: II/I**	
Level A. Easy Questions (2 marks each)		
S. No.	**Questions**	**CO***
Q1	What is NodeJS, and how does it contribute to modern web development?	CO5
Q2	Provide a concise example of the basic syntax used in writing a NodeJS script.	CO5
Q3	Why is NodeJS important in web development, and what practical advantages does it offer?	CO5
Q4	Write the differences between NodeJS and PHP/ASP, focusing on their distinct advantages in specific contexts.	CO5
Q5	What is the syntax for calling the REQUIRE module in NodeJS?	CO5
Q6	Explore briefly the various modules commonly used in NodeJS.	CO5
Q7	Give a brief syntax for creating a server in NodeJS.	CO5
Q8	List a few platform names where NodeJS is compatible.	CO5
Q9	Provide a concise explanation of different file servers in NodeJS.	CO5
Q10	Briefly demonstrate how to read a file using NodeJS.	CO5
Q11	Explain the concept of a "Read request" in NodeJS.	CO5
Q12	Provide a definition for "Return Request" in the context of NodeJS.	CO5
Q13	Give a syntax example for testing both "Read request" and "Response Request" in NodeJS.	CO5
Q14	What is meant by a NodeJS file?	CO5

Q15	How can you save a NodeJS file on your computer?	CO5
Q16	Explain the compatibility of MongoDB with NodeJS.	CO5
Q17	Elaborate on NodeJS events and provide an explanation of their functionality.	CO5
Q18	Define the term "EventEmitter" object in NodeJS and its significance.	CO5
Q19	In NodeJS, can you rename a file, and if so, how is it done?	CO5
Q20	List any four advantages of using NodeJS.	CO5
Q21	Explain why NodeJS is referred to as an "Open Source Server Environment."	CO5
Q22	Identify four platforms where NodeJS can be effectively utilized.	CO5
Q23	Name any 4 platform on which you can use NodeJS?	CO5
Level B. Intermediate Questions (5 marks each)		
Q24	Write a simple NodeJS program to print "Hello World" and explain the basic structure of the program.	CO5
Q25	Define NodeJS, and why is it referred to as asynchronous? Provide practical insights into its asynchronous nature.	CO5
Q26	Explain the capabilities of NodeJS and discuss the contents found in a NodeJS file.	CO5
Q27	Define the concept of a server and demonstrate how to create a server in NodeJS. .	CO5
Q28	Write a query in NodeJS to retrieve all documents in a collection named "products" where the "price" field falls between 10 and 20.	CO5
Q29	How do you use AJAX in jQuery? Explain with an example, focusing on the implementation of the `ADD` operation.	CO5
Q30	Write a NodeJS program to print your name and elucidate the modules used in the program.	CO5
Q31	Explain in detail how to read a file using NodeJS, providing practical insights into the process.	CO5
Q32	Illustrate the detailed steps to open a file using NodeJS, emphasizing practical implementation.	CO5
Q33	Explain in detail how to read a file using NodeJS, providing practical insights into the process.	CO5

Q34	Discuss about NodeJS, why is it important, and what are its detailed advantages and disadvantages? Provide practical insights into its significance in web development.	CO5
Q35	Explain in detail the different types of events used in NodeJS, emphasizing their practical applications and functionalities.	CO5
Q36	How are modules used in NodeJS? Explain with examples, focusing on practical scenarios to showcase their application.	CO5
Q37	Expand the term MongoDB, write its advantages and disadvantages, and discuss its compatibility with NodeJS. Provide practical insights into its use.	CO5
Q38	Describe the steps for creating an application in NodeJS? Provide a step-by-step guide, emphasizing practical considerations.	CO5
Q39	Write a server-side program to insert, update, delete student data in database using NodeJS. (CRUD operations)	CO5