



**KONGUNADU COLLEGE OF ENGINEERING AND TECHNOLOGY
(AUTONOMOUS)
THOLURPATTI (PO), THOTTIAM (TK), TRICHY (DT)-621 215
DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA
SCIENCE**

QUESTION BANK

20AD602 – WEB DEVELOPMENT FUNDAMENTALS

**III YEAR / VI SEMESTER
UNIT 1**

INTRODUCTION

N

PART - A

1. Define the client-server model and state its key components.
2. How do web clients and servers communicate? Explain the role of protocols in this communication.
3. Define relative URLs and state their significance in web development. Provide an example of when to use a relative URL.
4. How does a browser handle a relative URL when making a request to a web server? Explain the process.
5. State, how the client-server model functions in internet architecture, and elaborate on its significance in facilitating communication between devices.
6. Define an HTTP request message and state its typical structure.
7. How does an HTTP response message differ from a request message? State the components of an HTTP response.
8. Define XHTML and state its key differences from HTML. Why is adhering to syntax and semantics important in XHTML?
9. State, how web clients and web servers communicate, providing a step-by-step explanation of a typical HTTP request and response cycle.
10. How can syntax and semantics contribute to writing proper XHTML? Provide examples to illustrate their significance.
11. State, how XHTML differs from HTML and the rationale behind its introduction. Emphasize the importance of adhering to syntax and semantics in XHTML for creating well-formed documents.
12. Define the purpose of fundamental HTML elements such as <head>, <body>, <p>, and <h1>.
13. How do HTML lists, tables, frames, and forms contribute to the structure and functionality of a web page? Provide examples for each.
14. Define the <canvas> element in HTML5 and state its significance in web development.
15. How does the <canvas> element enhance the capabilities of web development? Provide examples of content that can be created using this element.

PART B

1. Explain the client-server model in internet architecture, detailing the functions of clients and servers. Analyze the scalability challenges associated with the client-server model, proposing potential solutions to address these challenges.
2. Explain the structure and purpose of an HTTP request message. Analyze how the design of HTTP facilitates communication between web clients and servers, considering aspects such as reliability, security, and extensibility.
3. Design an illustration outlining the client-server model in internet architecture. Explain the design choices made in representing key components and their interactions. Analyze the impact of the client-server model on the scalability and efficiency of internet communication.
4. Illustrate the client-server model in the context of internet architecture. Explain its key components and how they interact. Analyze the advantages and challenges associated with the client-server model in the modern internet landscape.
5. Illustrate any two additional features introduced in HTML5, apart from the <canvas> element. Explain how these features contribute to a more robust and interactive web experience. Analyze the impact of HTML5 on advancing web development capabilities.

PART C

1. a) Explain the structure of the HTML webpage with an example.
b) Define List Tag with an example.
2. Define Frameset, Frame Tag. Divide the web page into four equal parts each individual part displays different web page.
3. Define Form tag. Design a registration page by using all Form controls.
4. Define Table tag and their attributes with an example.

UNIT 2

CLIENT-SIDE TECHNOLOGY

PART A

1. What is the Box model in CSS? Which CSS properties are a part of it?
2. List the Limitations in CSS.
3. What are the advantages of using CSS?
4. What are the different types of Selectors in CSS?
5. Differentiate Inline and Internal CSS.
6. Define embedded CSS with an example.
7. Define the syntax for writing Inline CSS.
8. State the syntax of External CSS.
9. Mention the available CSS selectors.
10. Define universal selector in CSS.
11. List the features of CSS 3.0.
12. List out the control statements in JavaScript.
13. Define loop with example in java script.
14. Date and time in Java script.
15. Syntax for wring a java script.
16. What is the difference between the JavaScript and Java?
17. Mention the benefits of using JavaScript code in HTML Document?
18. What is the need for client-side scripting?

19. What are the advantages and disadvantages of indirectly embedding the JavaScript?
20. Mention the Primitive data types used in JavaScript.

PART B

1. Explain about CSS Box and Border properties.
2. Difference between Inline, internal and external CSS with an appropriate example.
3. Describe about Java script and its features with an example.
4. Explain the types of operators available in Java script.

PART C

1. Explain briefly about operators with an example in Java script.
2. Describe about Loops and conditions in Java script.
3. Illustrate in detail about CSS box and Border properties.

UNIT 3

SERVER - SIDE TECHNOLOGY

PART A

1. Design a PHP program to print reverse of any number
2. Define PHP Function.
3. List various types of arrays supported by PHP. How to declare arrays in PHP.
4. What is the use of \$ symbol in PHP, explain with an example.
5. Design a PHP code to swap any two numbers
6. List any two advantages of PHP.
7. Write the structure of PHP script with an example.
8. List various String Functions in PHP.
9. What are the data types supported by PHP.
10. What is the difference between JavaScript and PHP. Mention Apply () function uses.
11. Define JSP.
12. State about MVC.
13. List the Advantages of JSP.
14. What is DOM.
15. What is Document tree.

PART B

1. Define an Array? Explain about the types of Arrays in PHP with an example.
2. Explain variables and operators with example in PHP
3. Explain the predefined and user defined functions in PHP with an example.
4. Explain database connectivity in PHP with reference to MySQL.
5. a) Define Session and Cookies. Explain with an example program.
b) List and explain the Control structures used in PHP.
6. How to read data from web form control like Check boxes explain with an example.
7. a) Design a PHP script for uploading a file to the server and display the uploaded files details.
b) List and explain the string functions in PHP

PART C

1. What are the differences between Get and post methods in form submitting? Give the case where we can use get and we can use post methods
2. List the statements that are used to connect PHP with MySQL with an example.
3. Explain in detail about Intrinsic Event handling.
4. Illustrate in detail about the DOM parser.
5. Explain and illustrate about JSP with its syntax and semantics.
6. a) How to read data from web form control like Text boxes explain with an example.

b) Explain about Conditional Statements in PHP.

UNIT 4

SERVLETS AND XML

PART A

1. How is Servlet different from an Applet.
2. Explain about Servlet API.
3. How to create a cookie using servlet
4. What is servlet?
5. What are the Difference between Generic Servlet and HTTPServlet?
6. Discuss about Http Request
7. What is Session?
8. Discuss about Http Responses
9. What are the different types of session tracking mechanism supported by Servlets?
10. Explain about Common gateway interface.
11. Define XML? What are the advantages of XML.
12. Explain about the purpose of DTD.
13. Why are attributes used in XML.
14. Define DTD.
15. Define naming rules in XML.
16. Define XML Schema.
17. Distinguish between DTD and XSD.
18. Define SAX Parser.
19. Distinguish HTML and XHTML.
20. Give one example to define XML and DTD.

PART B

1. Justify the Common Gateway Interface (CGI) with neat Diagram
2. What is Servlet? Explain about Servlet API
3. a) What are the advantages of Servlets over CGI.
b) Explain Life Cycle of a Servlet.
4. Explain about Lifecycle of a Servlet with neat diagram
5. a) Distinguish between CGI and Servlets
b) Develop a Servlet that handles an HTTP POST request.
6. Develop a Servlet that handles an HTTP POST request.
7. What is JDBC. What are the various drivers of JDBC.
8. a) Distinguish between Get request and Post request type in Servlets.
b) Discuss about Session tracking in Servlets with a suitable example.
9. Explain briefly about cumulative sum and cumulative product with appropriate example.
10. How can both Internal and External DTDs be used in an XML File? Show with an Example
11. What is SAX? Write Advantages, Disadvantages and Features of SAX parser
12. Compare HTML and XML and Explain the procedure for validating the XML Documents
13. Explain about various types of XML Parsers
14. Define XHTML. What are the differences between XHTML and HTML with an example.
15. What is an XML DOM. How DOM parses the XML file.

PART C

1. What is JDBC? How to connecting to a database using JDBC
2. Demonstrate the use of Cookies in Servlets with an example.
3. What is calculus function? Explain briefly about the types of calculus with example.
4. Explain about External DTD and their categorization with examples.
5. Explain about XML Schema with an example.

6. a) List the advantages of XML Schemas over DTD s.
- b) Explain about Internal DTD's with an example.

UNIT 5

DYNAMIC WEB INTERACTIONS

PART A

1. What are the types of web services?
2. Define Web Service?
3. Give me an example of real web service?
4. How you define web service protocol stack?
5. Define XML – RPC?
6. Define Soap.
7. Can you define each of these layers of protocol stack?
8. Define WSDL?
9. Define the term "web service" and describe two key benefits of using them.
10. Explain the difference between SOAP and RESTful web services.
11. What are some real-world applications of web services?
12. Define Benefits of using web services.
13. State the Challenges of using web services.
14. Define RPC-style web services.
15. What is RESTful web services.

PART B

1. Explain the advantages and disadvantages of using RPC-style web services compared to RESTful web services.
2. Explain the key principles of RESTful web services, and examine how they contribute to improved interoperability and security.
3. Explain the difference between web APIs and traditional web services, and examine their role in modern software development.
4. Examine the trade-offs between SOAP and RESTful web services in terms of performance, security, and ease of use.
5. Examine the role of WSDL and its limitations in describing complex web services.

PART C

1. Explain the impact of web services on business-to-business (B2B) integration, and examine the challenges of maintaining security and data privacy.
2. Explain the potential of web services to enable real-time data exchange in the Internet of Things (IoT), and examine the challenges of ensuring compatibility and reliability.
3. Explain the ethical considerations surrounding data sharing and access through web services, and examine the challenges of balancing innovation with user privacy.
4. Examine the security concerns associated with different authentication and authorization mechanisms for web services.
5. Examine how caching can be used to improve the performance and scalability of web services.

Faculty Incharge

HOD