

Code: 21F00301

MCA III Semester Regular & Supplementary Examinations December/January 2024

WEB TECHNOLOGIES
(Master of Computer Applications)

Time: 3 hours

Max. Marks: 60

Answer all the questions

- 1 (a) What are the different types of arrays in PHP? How can you create an associative array and access its elements? 6M
(b) What are the advantages of using functions in PHP? How can you define and call a user-defined function? How can you pass parameters to a function and return values from a function? 6M

OR

- 2 (a) What are the different types of operators in PHP? Explain the difference between arithmetic, assignment, comparison, logical, and ternary operators with examples. 6M
(b) How can you handle file uploads in PHP? What are the steps involved in uploading a file from a web form to a server? How can you check the size, type, and name of the uploaded file? 6M

- 3 (a) How can you create a web form in HTML that allows users to enter and submit data? What are the different types of input elements and their attributes in HTML forms? 6M
(b) What is XML and what are its applications? How can you define your own XML tags, attributes, and values? What are the rules for writing well-formed XML documents? 6M

OR

- 4 (a) How can you use HTML frames to divide a web page into multiple sections? What are the advantages and disadvantages of using frames? 6M
(b) What is the Document Object Model (DOM) and how does it represent an XML document as a tree structure? How can you use DOM methods and properties to access and manipulate XML elements and attributes in Java? 6M

- 5 (a) What is the Common Gateway Interface (CGI) and how does it work? What are the limitations of using CGI for web applications? 6M
(b) How can you handle HTTP requests and responses in a Servlet? What are the methods and attributes of the HttpServletRequest and HttpServletResponse interfaces? 6M

OR

- 6 (a) How can you deploy a Servlet on a web server? What are the steps involved in creating, compiling, and packaging a Servlet? 6M
(b) How can you use cookies and sessions to maintain state information between multiple requests from the same client? What are the differences between cookies and sessions in terms of scope, lifetime, and security? 6M

- 7 (a) What are the advantages of using JSP over Servlets for creating dynamic web pages? Explain with an example. 6M
(b) How can you use JavaBeans in JSP pages? What are the benefits of using beans over scriptlets? How can you use the jsp:useBean, jsp:setProperty, and jsp:getProperty tags to manipulate bean properties? 6M

OR

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- 8 (a) What are the components of a JSP page? How are they processed by the JSP engine? 6M
Draw a diagram to illustrate the JSP life cycle.
- (b) How can you connect to a database in JSP using JDBC? What are the steps involved in loading a driver, establishing a connection, executing a query, processing the results, and closing the resources? Write a sample code to demonstrate database connectivity in JSP. 6M
- 9 (a) How can you declare variables in JavaScript? What are the differences between var, let, and const keywords? How can you determine the scope of a variable in JavaScript? 6M
- (b) How can you use the form object to access and validate the data entered by the user in an HTML form? What are some of the properties and methods of the form object that you can use in JavaScript? 6M

OR

- 10 (a) What are event handlers in JavaScript and how can you use them to handle user interactions? What are the differences between inline, attribute, and listener-based event handlers? How can you use the `addEventListener()` and `removeEventListener()` methods to register and unregister event handlers? 6M
- (b) How can you use the `alert()`, `confirm()`, and `prompt()` methods to display dialog boxes to the user in JavaScript? What are the differences between these methods and how can you use their return values? 6M

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MCA III Semester Supplementary Examinations May 2024

WEB TECHNOLOGIES

(Master of Computer Applications)

Time: 3 hours

Max. Marks: 60

Answer all the questions

- 1 (a) What are the different types of control structures in PHP? Explain the syntax and usage of if-else, switch-case, for, while, and for each statements with examples. 6M
(b) How can you read data from web form controls like text boxes, radio buttons, and lists in PHP? What are the super global variables \$_GET and \$_POST used for? 6M

OR

- 2 (a) How can you connect to a MySQL database using PHP? What are the functions used to establish a connection, select a database, execute a query, fetch results, and close a connection? 6M
(b) How can you handle sessions and cookies in PHP? What are the differences between sessions and cookies? How can you create, access, modify, and destroy sessions and cookies? 6M

- 3 (a) What are the advantages of using Cascading Style Sheets (CSS) for web design? Explain with an example how to link a CSS file to an HTML document. 6M
(b) What are the types of images that can be embedded in HTML documents? How can you specify the source, size, alignment, and alternative text for an image? 6M

OR

- 4 (a) What are the differences between HTML and XML? Give an example of a well-formed XML document that contains a list of books with their titles, authors, and prices. 6M
(b) What are the types of lists in HTML? How can you create a nested list that contains both ordered and unordered lists? 6M

- 5 (a) What are the stages of the life cycle of a servlet? How can you override the init(), service(), and destroy() methods of the Http Servlet class? 6M
(b) How can you read servlet parameters from an HTML form or a query string? How can you read initialization parameters from the web.xml file or the @WebInitParam annotation? 6M

OR

- 6 (a) What are cookies and sessions in web applications? How can you create, read, and delete cookies using the Cookie class and the addCookie(), get_cookies(), and setMaxAge() methods? 6M
(b) How can you connect to a database using JDBC in a servlet? What are the steps involved in loading a driver, establishing a connection, executing a query, processing the result set, and closing the connection? 6M

- 7 (a) What is a JSP page and how is it processed by the web server? Explain the steps involved in the JSP life cycle and the role of the JSP engine. 6M
(b) What are the implicit objects in JSP and how are they created and accessed? Name and describe the nine implicit objects that are available in every JSP page. 6M

OR

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- 8 (a) What are the types of JSP elements and how are they used in a JSP page? Give examples of declarations, directives, expressions, and code snippets in JSP syntax. 6M
- (b) What are the types of directives in JSP and what are their functions? How can you use the page, include, and taglib directives to specify page attributes, include other files, and use custom tags in JSP? 6M
- 9 (a) What is client-side scripting and what are the benefits of using JavaScript for web development? Give an example of a simple JavaScript code that displays an alert message on the web page. 6M
- (b) How do you define and call functions in JavaScript and what are the types of parameters and arguments that can be passed to them? Explain the concepts of default parameters, rest parameters, and arrow functions with examples. 6M
- OR**
- 10 (a) What is the scope of a variable in JavaScript and how does it affect its visibility and lifetime? Explain the concepts of global, local, and block scope with examples. 6M
- (b) What is the Document Object Model (DOM) and how does it represent the structure and content of a web page? How can you access and manipulate DOM elements and attributes using the document object and its methods (such as getElementById(), getElementsByClassName(), querySelector(), etc.)? 6M

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MCA III Semester Supplementary Examinations August/September 2023

WEB TECHNOLOGIES
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Time: 3 hours

Max. Marks: 60

Answer all the questions

- 1 (a) Write a PHP script that reads data from one file and write into another file. 6M
(b) Explain how sessions and cookies are handled in PHP. 6M
- OR**
- 2 (a) Discuss the file handling in PHP. What is dynamic HTML? What is its need? 6M
(b) Explain how data is read from web form controls like text box and radio buttons. 6M
- 3 (a) Compare and contrast between DTD and XML schemas. 6M
(b) Explain about various types of XML Parsers. 6M
- OR**
- 4 (a) What is XML? How XML tags are defined? Explain attributes and values with suitable example. 6M
(b) What is dynamic HTML? What is its need? 6M
- 5 (a) Justify the Common Gateway Interface (CGI) with neat Diagram. 6M
(b) Develop a Servlet that handles an HTTP POST request. 6M
- OR**
- 6 (a) What is JDBC? What are the various drivers of JDBC? 6M
(b) Discuss about Session tracking in Servlets with a suitable example. 6M
- 7 (a) Discuss the two phases of jsp processing with suitable example. 6M
(b) How is database accessed from jsp pages? Give example. 6M
- OR**
- 8 (a) Explain the different jsp elements. 6M
(b) Explain how jsp is better than servlet with suitable example. 6M
- 9 (a) Write a java script to count the number of characters entered by a user in a text box and limit to it to a particular limit. 6M
(b) Discuss the different event handlers in Java script. 6M
- OR**
- 10 (a) Discuss the form validation in Java script with suitable example. 6M
(b) What is client-side scripting? Discuss the facilities provided in Java script for client-side scripting. 6M

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MCA III Semester Regular Examinations March 2023

WEB TECHNOLOGIES

(For students admitted in 2021 only)

Time: 3 hours

Max. Marks: 60

Answer all the questions

- 1 (a) Write a PHP script to merge two arrays and sort them as numbers in descending order. 6M
(b) Explain control structures in PHP with suitable example. 6M
- OR**
- 2 (a) Write a PHP script to search for a specific string. 6M
(b) Explain database connectivity in PHP with reference to MYSQL. 6M
- 3 (a) Differentiate between DOM and SAX. 6M
(b) How can both Internal and External DTDs be used in an XML File? Show with an example. 6M
- OR**
- 4 (a) Write a program, which takes User Id as an input and returns the user details by taking the user information from the XML document. 6M
(b) What is frame? Explain <frame> tag with example. 6M
- 5 (a) Discuss the life cycle of servlet with suitable example. 6M
(b) Demonstrate the use of Cookies in Servlets with an example. 6M
- OR**
- 6 (a) Discuss in detail the servlet API. 6M
(b) Discuss about Get request and Post request type in Servlets. 6M
- 7 (a) Justify the differences between servlets and JSP. 6M
(b) Explain about the different methods used for Session tracking in JSP. 6M
- OR**
- 8 (a) What is JSP? Explain about the JSP processing. 6M
(b) How are Cookies used for Session tracking in JSP? Give example. 6M
- 9 (a) Describe the Document object model with respect to Javascript. 6M
(b) Discuss about functions in Javascript with suitable program example. 6M
- OR**
- 10 (a) Write a Javascript to validate a form consisting of a user name and navigate to another web page after validation. 6M
(b) What for Javascript is used? Discuss about event handlers in Javascript. 6M
