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**Question Paper Code : 70448**

B.E./ B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2023.

Sixth Semester

Computer Science and Engineering

CS 8651 – INTERNET PROGRAMMING

(Common to: Computer and Communication Engineering)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is Web 2.0?
2. With the help of a sample URL, specify its components.
3. Provide DOM tree for a basic HTML document.
4. List any four methods in date object in JavaScript.
5. Define Servlet.
6. Write the JSP tag used to print the result of  $112 \times 123$ .
7. List any four built-in functions in PHP.
8. Write the DTD for following XML Tags:  

```
<Book id="B001">  
  <Title>Head First Java</Title>  
  <Category>Programming</Category>  
  <FAuthor>Kathy Sierra</FAuthor>  
</Book>
```
9. What is meant by Ajax? And write its features.
10. What is WSDL? And write its applications.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Write a HTML page that displays the following table: (7)

Month	Savings	Maximum Savings/month
January	\$100	\$100
February	\$80	
Total Savings		\$180

- (ii) Write the HTML page with a tag to insert an image “products.png” and link the image to a html page name “productlist.html”. (6)

Or

- (b) Design the following webpage using HTML and CSS grids by externally linking the CSS with 4 images as given below Figure 11(b).

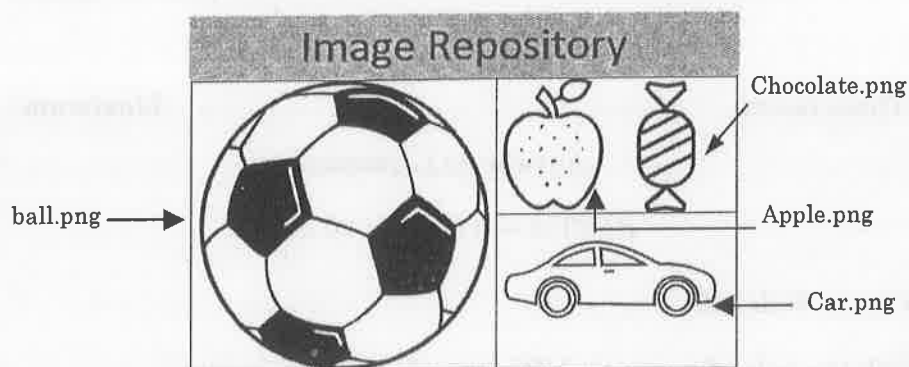


Figure 11(b)

12. (a) Create a HTML Page with components as shown below, with the following Java Script validations:

- (i) Mandatory fields should be verified (those with\*)
- (ii) Username should be a valid mail-id
- (iii) Mobile number should be digits with minimum 10 digits.
- (iv) Password should be of length 8.

Login Credentials

User Name (mail-id)*	
Password*	
Mobile number	
register	

Or

- (b) Create the HTML page with components as below. Write the JAVA SCRIPT code such that:

- (i) On clicking Add, a number entered should be added in an array (validate for number and empty cases).
- (ii) On Clicking Sum, the array elements and the sum of array should be printed as given.

<input type="text"/>	Add	Sum
----------------------	-----	-----

Array:-21-67-11

Sum is : 99

13. (a) (i) Explain in detail Servlet life cycle. (7)  
(ii) Differentiate GET and POST method. (6)

Or

- (b) Discuss upon how the web page developed using JSP is simplified using JSTL.

14. (a) Create a PHP application that calculates BMI – Body Mass Index of a person by giving input through the form and print the status of BMI category as a response in the next page as below. Figure 14(a).

**BMI Calculator**

Height(m)

Weight (kg)

**Calculate BMI**

Your BMI: 29.0318  
You're Obese. The normal BMI range is between 18.5 and 24.9

Figure 14(a)

Note:

BMI category is

<18.5 Underweight

18.5 – 24.9 Healthy

25 – 29.9 Overweight

>30 Obese

and the formulae is  $[\text{weight (kg)} / [\text{height (m)}]^2]$

Or

- (b) Write an XML file to store list of employees with employee details including employee id, name, date of birth and designation, and provide the corresponding XSD file with the appropriate data types.
15. (a) (i) Describe in detail AJAX architecture. (7)  
 (ii) Discuss about XMLHttpRequest object. (6)  
 Or  
 (b) Explain in detail about Web Services and the structure of SOAP Request and Response.

PART C — (1 × 15 = 15 marks)

16. (a) Create the HTML page with components below. Write the Java Script code such that:
- (i) Select the image names from the select list [Balloon/Apple/Ball/Cot].
- (ii) On Clicking View in, the image corresponding to the value selected in the list should be loaded and the color given in the input filed should be set as the background.
- Select the image :

← Select option box



Click the button to change the selected image.

 with  Color background

Or

- (b) Develop a web application using HTML with following components shown in figure. Write a JavaScript code such that on selection of a product and on clicking the GetPrice button, initiate an AJAX request to get the price of product from the JSON file named product. JSON and fill it as text value. The JSON file is:

Product.json:

```
{
  "Product" : [{"name": "Balloon", "price": "5/Piece"},
                {"name": "Apple", "price": "150/kg"},
                {"name": "Ball", "price": "350"},
              ]
}
```

HTML Page :

Select the Product: