

22234768023

Satyendra Pal
Yogendra Sr

Master of Computer Applications

MCAC205: Web Technologies

Unique Paper Code: 223421205

Semester II

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Year of Admission: 2022

Max. Marks: 70

Time: Three Hours

Instructions: Attempt **Part-A** and **Part-B** separately.

PART-A (Objective Type Questions)

Each question from 1-12 carries 1.5 marks and 13-14 carries 1 mark.

1. Which of the below command will show all the modules installed locally?
a) Npm ls b) Npm ls -g c) Npm list d) Node ls -g
2. How do we return a path string from the given path object in Node.js?
a) path.get() b) path.set() c) path.format() d) path.return()
3. Which type of application does not prefer the backend as node.js?
a) Single Page b) JSON APIs based c) CPU intensive d) Data-Intensive
4. All of the following are examples of real security and privacy risks, EXCEPT:
a) Hackers b) Spam c) Viruses d) Identity theft
5. How modules in Node.js can be connected from one component to another?
a) Expose b) Module c) Exports d) All of the above
6. Which fs module in Node.js is used to get the file information?
a) fs.open(path, flags[, mode], callback) b) fs.stat(path, callback)
c) fs.readFile(path, flags[, mode], callback) d) None of the above
7. A Proxy server is used for which of the following?
a) To provide security against unauthorized users
b) To process client requests for web pages
c) To process client requests for database access
d) To provide TCP/IP

8. Firewalls are used to protect against ____

- a) unauthorized Attacks
- c) Data Driven Attacks

- b) virus Attacks
- d) Fire Attacks

9. The digital signature is:

- a) A form of security for electronic records
- c) Task

- b) Copy
- d) Area

10. function fun()

```
{  
    int y=10;  
    char z=10;  
    if(y.toString() == z)  
        return true;  
    else  
        return false;  
}
```

- a) logical error
- b) false
- c) runtime error
- d) true

11. <input> is -

- a) format tag
- b) an empty tag
- c) All of the above
- d) None of the above

12. What will be the output of the following code?

```
<script type="text/javascript">  
    a = 8 + "8";  
    document.write(a);  
</script>
```

13. The external JavaScript file must contain <script> tag.

- a) True
- b) False

14. Cyber criminals only target large companies.

- a) True
- b) False

PART-B

Instructions: Attempt all parts of a question together.

1. a. What are Cascading Style Sheets? Illustrate the concept of an internal style sheets with examples. 3
- b. Write a JavaScript program to find the addition and multiplication of a given number using onClick to change the content of other fields. For example: 7

Field1.....2	Field2.....4	Field3.....6
<input type="button" value="sum"/> <input type="button" value="multiply"/>		Result.....12

2. a. With the help of an example, explain the structure of an XML document. 3
- b. Write a JavaScript code to validate the given form details. 7

Name*	<input type="text"/>
Address	<input type="text"/>
Zip Code*	<input type="text"/>
Country*	Please select... ▼
Gender*	<input type="radio"/> Male <input type="radio"/> Female
Preferences*	<input type="checkbox"/> Red <input type="checkbox"/> Green <input type="checkbox"/> Blue
Phone*	<input type="text"/>
Email*	<input type="text"/>
password (6-8 characters)*	<input type="text"/>
Verify password*	<input type="text"/>
<input type="button" value="SEND"/> <input type="button" value="CLEAR"/>	

3. a. Write a JavaScript function to accept a numeric array as input parameter and display the largest number in the array. Also call the function in an HTML page. 4
- b. Write HTML code for the following table: 6

Time/Day		9:00 am to 1:00 pm	2:00 pm to 5:00 pm
Mon to Fri	Web Technologies	Theory Class	Lab Class
	CS Department	Room No 114	Lab No- 1
Sat	Web Technologies	Extra-curricular activity	
	CS Department		

4. a. Write a code to create an HTTP server that listens on port 3000 and returns the text "Hello, World!" when accessed. 5
- b. Write a code to handle file uploads in a Node.js application. Allow users to upload files, validate the file type and size, and save the file to the server or cloud storage. 5
5. a. What is the purpose of the core modules in node.JS? Explain with examples. 3
- b. How would you connect a MongoDB/MySQL database to Node.js? 3
- c. What is the primary reason for using the event-based model in Node.js? 4