

B.Sc. - II (Data Science) NEP - Semester-III
BSCDS031 - Web Application Development

P. Pages : 2

Time : Three Hours



GUG/W/24/16144

Max. Marks : 80

1. A) What is JSON and why is it commonly used in web development? Describe its main features. 8

B) Compare JSON and XML in terms of structure, readability and usage in web applications. 8

OR

C) How can JSON be used with PHP? Explain how to encode and decode JSON data in PHP. 8

D) Describe the purpose of `JSON.parse()` and `JSON.stringify()`. Provide the example. 8

2. A) Describe the basic syntax of PHP and explain the different types of comments used in PHP. 8

B) Explain the use of if, if-else and switch statements in PHP with examples. 8

OR

C) How are variables declared and used in PHP? Provide examples of variable declaration and usage. 8

D) Explain how arrays are used in PHP. Describe common array operations and provide examples. 8

3. A) Briefly discuss the history of React and highlight its key features that differentiate it from other JavaScript frameworks. 8

B) What is JSX in React and how does it simplify the process of creating UI elements? 8

OR

C) Explain the purpose of lifecycle methods in React with the help of example. 8

D) How are events handled in React? Provide example of handling user interactions with events. 8

4. A) Explain what Node.js is and discuss why it is used for server-side development. Highlight its key features. 8
- B) Explain the role of the http module in Node.js. How can it be used to create a basic web server? 8

OR

- C) How does the fs module in Node.js facilitate file operations? Provide examples of this module. 8
- D) How do you interact with a MySQL database from a Node.js application? 8
5. A) Compare jQuery and JavaScript. 4
- B) How do try, catch and finally work in PHP? Provide examples. 4
- C) Compare function-based and class-based components in React. 4
- D) Explain how Node.js interfaces with MongoDB. 4
