

# KAMARAJ COLLEGE (Autonomous)

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(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(4 Pages)

Reg. No:.....

Question Code: 26E01112

Course Code : 24USCS41

UG Degree - End Semester Examinations, April 2026

Fourth Semester

B.Sc., COMPUTER SCIENCE

Web Frameworks

(For those who joined in July 2024 onwards)

Time : 3Hours

Maximum : 75 Marks

## PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

- CO:1  
K:1
1. What is the default number of columns in Bootstrap's grid system?
- (a) 10 columns (b) 12 columns  
(c) 16 columns (d) 24 columns
- CO:1  
K:2
2. Which of the following is a version control system used in web development?
- (a) Npm (b) Bootstrap  
(c) Git (d) Yarn
- CO:2  
K:1
3. Which Bootstrap class is used to create a responsive image that scales with the parent element?
- (a) .img-responsive (b) .img-fluid  
(c) .img-scale (d) .responsive-img
- CO:2  
K:2
4. In Bootstrap, which class is used to create an emphasized/italicized text?
- (a) .text-emphasis (b) .font-italic  
(c) .text-italic (d) .emphasis
- CO:3  
K:1
5. Which Bootstrap component is used to create a menu that appears when a button is clicked?
- (a) Navigation List (b) Dropdown Menu  
(c) Drop-up Menu (d) Both B and C

- CO:3 6. What is the primary difference between a dropdown and a drop-  
K:2 up menu in Bootstrap?
- (a) Color scheme (b) The direction in which the menu opens
- (c) Size of the menu (d) Animation effects
- CO:4 7. Which of the following is NOT a component of Bootstrap  
K:1 JavaScript Plugins Programmatic API?
- (a) Usage (b) Options
- (c) Methods (d) Animations
- CO:4 8. What preprocessor is commonly used for customizing Bootstrap?  
K:2
- (a) SASS (b) LESS
- (c) Stylus (d) PostCSS
- CO:5 9. Which syntax extension is used in React to write HTML-like code  
K:1 within JavaScript?
- (a) HTML (b) XML
- (c) JSX (d) JSON
- CO:5 10. What are the main building blocks of an Angular application?  
K:2
- (a) Functions and Classes (b) Modules, Components and Services
- (c) Pages and Scripts (d) Templates and Stylesheets

**PART - B (5 X 5 = 25 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 250 words.**

- CO:1 11. (a) Explain the basic differences between Front-End and Back-  
K:2 End development with suitable examples.

**(OR)**

- (b) Illustrate the key differences between Frameworks and Libraries used in web development with examples.

- CO:2 12. (a) Demonstrate the use of heading classes in Bootstrap  
K:3 Typography with suitable examples.

**(OR)**

- (b) Construct the different supported form controls in Bootstrap with examples.

CO:3 13. (a) Analyze how Bootstrap button groups can be implemented and function as radio buttons and checkboxes with suitable examples.  
K:4

**(OR)**

(b) Discover the need for navigation elements in Bootstrap and explain how they enhance website usability and structure.

CO:4 14. (a) Evaluate the implementation of the Bootstrap Modal plugin in a web application and justify its advantages and limitations with an example.  
K:5

**(OR)**

(b) Compare the different methods of customizing Bootstrap for projects and justify which approach is most suitable for scalable web development.

CO:5 15. (a) Develop an interactive “Hello, World” application using Create React App and JSX, incorporating basic user interaction.  
K:6

**(OR)**

(b) Design an Angular application architecture and construct its structure by integrating Modules, Components and Services with appropriate roles.

**PART - C (5 X 8 = 40 Marks)**

**Answer ALL Questions choosing either (a) or (b).**

**Answer should not exceed 500 words.**

CO:1 16. (a) Explain the working process of the Bootstrap Grid System with a simple example.  
K:2

**(OR)**

(b) Outline the importance and common usage of Web Development Tools in website creation.

CO:2 17. (a) Illustrate the concept of Bootstrap Forms by applying appropriate form components in a web page.  
K:3

**(OR)**

(b) Apply Bootstrap CSS Typography classes to format text content in a sample web page.

CO:3 18. (a) Analyze the implementation and behavior of Bootstrap  
K:4 Dropdown Menus in dynamic web applications.

**(OR)**

(b) Classify the different components of Bootstrap Navigation and explain their roles in website design.

CO:4 19. (a) Critically evaluate the features and practical significance of  
K:5 Bootstrap JavaScript Plugins in modern web development.

**(OR)**

(b) Design a real-world responsive web page using Bootstrap components and justify the design choices made for usability, responsiveness and performance.

CO:5 20. (a) Design and develop a sample web application using the React  
K:6 framework that demonstrates its core features and component-based architecture.

**(OR)**

(b) Develop and implement an Angular.js application architecture and justify the use of its core features through a practical application.