Web Design & JavaScript Final Exam
Duration: 2 hours 30 minutes

Instructions:
- This paper contains four parts:
  Part 1: MCQ (30 marks)
  Part 2: Short Questions (20 marks)
  Part 3: Coding Problems (30 marks)
  Part 4: Mini Project (20 marks)
Total: 100 marks

Part 1: MCQs (Each 2 marks) - 15 questions

Answer Key & Solutions:

1. Which HTML5 tag is used to define navigation links?
Answer: <nav>

2. What does CSS box-model include?
Answer: margin, border, padding, content

3. Which property centers a block element horizontally?
Answer: margin: 0 auto;

4. Bootstrap grid uses how many columns by default?
Answer: 12

5. Which tag is used to include JavaScript file?
Answer: <script src='...'>

6. Which CSS selector selects elements with class 'btn'?
Answer: .btn

7. Which HTTP method is typically used to submit form data?
Answer: POST

8. What does '===' do in JavaScript?
Answer: Strict equality (type+value)

9. Which event fires when a form is submitted?
Answer: submit

10. Which Bootstrap class creates a responsive image?
Answer: img-fluid

11. How do you declare a JavaScript function?
Answer: function myFunc() {}

12. Which CSS property changes text color?
Answer: color

13. Which HTML attribute specifies an input's placeholder?
Answer: placeholder

14. Which JavaScript method logs to console?
Answer: console.log()

15. In CSS, how do you select an element with id 'main'?
Answer: #main

Short: Explain the HTML5 semantic elements and why they are important.
Model answer: (teacher notes)

Short: Describe the CSS box model and how padding and margin affect layout.
Model answer: (teacher notes)

Short: What is the Bootstrap grid system? Give an example of using col-md-6.
Model answer: (teacher notes)

Short: Explain JavaScript variable types and difference between var, let, const.
Model answer: (teacher notes)

Short: Describe event delegation in JavaScript and why it's useful.
Model answer: (teacher notes)

Coding Problem: Build a responsive navbar using Bootstrap 5 that collapses on small screens.
Solution: Provide sample code and explanation.

Coding Problem: Write a JavaScript function that validates a form: ensure 'name' is not empty and email
Solution: Provide sample code and explanation.

Coding Problem: Create a CSS layout using Flexbox to center a card both vertically and horizontally.
Solution: Provide sample code and explanation.

Project: Create a small web page (mini project) combining HTML, Bootstrap and JS: a to-do app with ad
Evaluation Rubric: Functionality 10, UI 5, Code quality 5