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20MCA41

## Fourth Semester MCA Degree Examination, July/August 2022 Advances in Web Technologies

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

### Module-1

- 1 a. Explain various scalar types and operators available in PHP. (10 Marks)  
 b. Explain the various looping statements in PHP. Write any PHP code to explain 'for' loop. (10 Marks)

OR

- 2 a. Outline file handling in PHP. (10 Marks)  
 b. Illustrate steps to join web form with database in PHP. (06 Marks)  
 c. Write a short note on Cookies in PHP. (04 Marks)

### Module-2

- 3 a. Illustrate with syntax any eight built-in-methods for arrays in Ruby. (08 Marks)  
 b. Explain codeblocks and iterators with sample code in Ruby. (06 Marks)  
 c. Summarize the following string methods i) Capitalize ii) Strip iii) Chop. (06 Marks)

OR

- 4 a. With a neat diagram, explain directory structure for Rails application. (10 Marks)  
 b. Illustrate the concept of classes in Ruby with an example. (10 Marks)

### Module-3

- 5 a. What is Ajax? Explain with an diagram, how it is different from traditional web applications. (10 Marks)  
 b. With a neat diagram, explain Ajax web application model. (10 Marks)

OR

- 6 a. With an example illustrate sending data to server using methods of GET and POST for HTTPRequest object. (10 Marks)  
 b. List and explain Ajax principles. (06 Marks)  
 c. Differentiate between synchronous and Asynchronous requests. (04 Marks)

### Module-4

- 7 a. Explain how to handle multiple XMLHttpRequest objects in the same page. (08 Marks)  
 b. Explain the pattern of predictive fetch using Ajax. (08 Marks)  
 c. Write a note on submission throttling. (04 Marks)

OR

- 8 a. With example, explain pattern of periodic refresh and fall back pattern in Ajax. (10 Marks)  
 b. Illustrate how to implement the Ajax pattern of multistage download. (10 Marks)

### Module-5

- 9 a. What is Bootstrap? Explain the Bootstrap life structure with a neat diagram and give an example of basic HTML template using Bootstrap. (10 Marks)  
 b. With a sample code explain Fluid Grid system and container layouts. (10 Marks)

OR

- 10 a. Explain with an example, the Bootstrap Button classes for different styles of Button in Bootstrap CSS. (10 Marks)  
 b. Explain the following HTML concepts with Bootstrap CSS, i) Headings ii) Emphasis classes. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.