

# CBCS SCHEME

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20MCA41

## Fourth Semester MCA Degree Examination, Dec.2023/Jan.2024 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. How to create an array in PHP? Explain any five array functions in PHP with example. (10 Marks)  
b. Explain file handling functions in PHP with example. (10 Marks)

OR

- 2 a. What are cookies and sessions in PHP? How to create a session and cookies? Give an example. (10 Marks)  
b. Explain the form handling methods in PHP with programming example. (10 Marks)

### Module-2

- 3 a. Explain any four built-in methods for arrays and hashes in Ruby with example. (10 Marks)  
b. Explain the following iterators with example: (10 Marks)  
i) Times  
ii) Each  
iii) Step  
iv) collect & collect!

OR

- 4 a. Explain with a diagram, the directory structure of rails application. (10 Marks)  
b. Explain any five string methods in Ruby with example. (10 Marks)

### Module-3

- 5 a. Differentiate between classic web application model and AJAX application model. Explain the Architecture of AJAX. (10 Marks)  
b. Explain the AJAX principles in detail. (10 Marks)

OR

- 6 a. Explain the steps for sending data to the server using POST method using AJAX. (10 Marks)  
b. Explain the following with respect to AJAX: (10 Marks)  
i) OnReadyStateChange property  
ii) ReadyState  
iii) GET and POST method  
iv) ResponseText property

### Module-4

- 7 a. Explain how to handle multiple XMLHttpRequest objects in the same page, with an example. (10 Marks)  
b. Write a short notes on : (10 Marks)  
i) Pattern- Predictive Fetch algorithm.  
ii) Multi-stage download

OR

- 8 a. Explain how to create an XHR [XMLHttpRequest] object in AJAX application. (10 Marks)  
b. Explain the following :  
i) Periodic Refresh and Fallback patterns  
ii) Submission throttling. (10 Marks)

Module-5

- 9 a. What is Bootstrap? Explain the grid system in detail with example. (10 Marks)  
b. Explain the typography and links in Bootstrap with example. (10 Marks)

OR

- 10 a. Write a program to create vertical form. (06 Marks)  
b. Explain how to use Bootstrap Icons in your code with example. (06 Marks)  
c. Explain different table classes with suitable example. (08 Marks)

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