NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: VI - THEORY EXAMINATION (2023 - 2024)

Subject: Full-Stack Web Development using Laravel with Vue.JS

Time: 3 Hours   Max. Marks: 100

General Instructions:

IMP: *Verify that you have received the question paper with the correct course, code, branch etc.*

1. *This Question paper comprises of* **three Sections -A, B, & C.** *It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.*

2. *Maximum marks for each question are indicated on right -hand side of each question.*

3. *Illustrate your answers with neat sketches wherever necessary.*

4. *Assume suitable data if necessary.*

5. *Preferably, write the answers in sequential order.*

6. *No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.*

<div align="center">SECTION A   20</div>

1. Attempt all parts:-

1-a.   Select the correct use of .env file in Laravel. (CO1)   1

(a) Setting Up local Environment variable

(b) Optimization

(c) Hosting

(d) None of these

1-b.   View files in Laravel end in (CO1)   1

(a) .blade.php

(b) .php

(c) .vue

(d) .blade

1-c.   Select the valid Vue.js template directive. (CO2)   1

(a) v-foo

(b) v-bind

(c) v-model

(d) All of the above

1-d. Select the purpose of the v-if directive in Vue.js. (CO2) 1

  (a) To loop through an array and render a list of items

  (b) To conditionally render HTML based on a boolean expression

  (c) To manage the state of a Vue.js component

  (d) None of the above

1-e. Choose correct design pattern that is used by Laravel's Event Dispatcher (CO3) 1

  (a) Command pattern

  (b) Observer pattern

  (c) Decorator pattern

  (d) Template pattern

1-f. Choose how we can authenticate a user by both username and email in Laravel (CO3) 1

  (a) By modifying the authentication guard

  (b) By modifying the user model

  (c) By modifying the login controller

  (d) By using the Laravel built-in authentication feature

1-g. In Laravel, choose the correct one to write connection (CO4) 1

  (a) A connection that is used for reading data from a database

  (b) A connection that is used for writing data to a database

  (c) A connection that is used for both reading and writing data to a database

  (d) None of the above

1-h. Select the correct statement to use multiple read connections in Laravel (CO4) 1

  (a) Yes, you can use multiple read connections

  (b) No, you can only use one read connection

  (c) It depends on the version of Laravel being used

  (d) None of the above

1-i. Choose the correct option about Laravel Forge. (CO5) 1

  (a) A PHP framework

  (b) A server management tool for PHP applications

  (c) A database management tool

  (d) None of these

1-j. Select how often should autoloader optimization be run in Laravel Forge. (CO5) 1

(a) Once a day

(b) Once a week

(c) Whenever the application is updated or deployed

(d) Once a month

2. Attempt all parts:-

2.a.	Discuss the benefits of using constructor injection. (CO1)	2
2.b.	Show that how Vue.js methods differ from computed properties, and in what situations should each be used. (CO2)	2
2.c.	Define a provider in Laravel authentication. (CO3)	2
2.d.	Write some of the popular databases supported by Laravel out of the box. (CO4)	2
2.e.	Discuss how you can check if a character is a digit using the Ctype extension in PHP. (CO5)	2

SECTION B   **30**

3. Answer any five of the following:-

3-a.	Explain Laravel and what kind of software development framework is it. (CO1)	6
3-b.	Explain the system requirements for installing and running Laravel. (CO1)	6
3-c.	Give an example of how you would bind a value to the href attribute of an anchor tag. What is the difference between using v-bind:href and :href. (CO2)	6
3-d.	Discuss the differences between using {{ }} and v-text for displaying data in a template. (CO2)	6
3.e.	Explain the benefits of laravel application using Artisan commands. (CO3)	6
3.f.	Show the retrieval of a specific record from a database table using Laravel Eloquent. (CO4)	6
3.g.	Explain some common deployment tools and technologies that is used in deploying Laravel applications to production (CO5)	6

SECTION C   **50**

4. Answer any one of the following:-

4-a.	Explain that how does Laravel's "Model-View-Controller" (MVC) architecture help developers build scalable and maintainable web applications. (CO1)	10
4-b.	Discuss the various benefits of using Terminable Middleware, such as reducing memory usage, improving response times, and simplifying the overall middleware architecture. (CO1)	10

5. Answer any one of the following:-

5-a. Using template syntax and expressions, create a Vue.js component that displays a list of items with checkboxes. When the user checks an item, the background color of that item should change to a user-specified color. (CO2)   10

5-b. Explain the concept of computed properties in Vue.js. Provide an example of how to use a computed property to manipulate data in a Vue.js component. (CO2)   10

6. Answer any <u>one</u> of the following:-

6-a. Create a model factory that generates fake data for a model with fields for a name, email, and phone number. Use the Laravel Faker package to generate realistic data for these fields. (CO3)   10

6-b. Discuss how I can restrict access to certain pages or routes to only users with specific roles or permissions, using Laravel's built-in Authorization system. (CO3)   10

7. Answer any <u>one</u> of the following:-

7-a. Provide examples of how Eloquent can be used to perform basic database operations, such as creating, reading, updating, and deleting records. (CO4)   10

7-b. Explain some advanced migration techniques, such as using raw SQL in migrations or seeding initial data after table creation. (CO4)   10

8. Answer any <u>one</u> of the following:-

8-a. Explain how you measure the performance of a Laravel application in a production environment. (CO5)   10

8-b. Write some common scalability challenges faced when deploying a Laravel application to a production environment, and how can they be addressed. (CO5)   10