NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

M.Tech (Integrated)

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.*

SECTION A　　　　　　　　　　　　　　　　　　　**20**

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

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SECTION B   30

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3. Answer any <u>five</u> 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

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SECTION C   50

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4. Answer any <u>one</u> 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 <u>one</u> 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