NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)
B.Tech
SEM: VI - THEORY EXAMINATION (20.....- 20.....)
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 name of database system that Laravel support out of the box. (CO1, K1)   1

    (a)   Oracle

    (b)   MongoDB

    (c)   PostgreSQL

    (d)   MySQL

1-b.   Choose the correct option of Blade in Laravel (CO1, K2)   1

    (a)   A template engine

    (b)   A web server

    (c)   A database migration tool

    (d)   A package manager

1-c.   Select the directive which is used to bind data to an element's "value" attribute in Vue.js. (CO2, K1)   1

    (a)   v-model

    (b)   v-bind

    (c)   v-show

    (d)   v-on

1-d.   Choose the purpose of the v-show directive in Vue.js. (CO2, K2)   1

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

    (b)   To bind data to an element's "value" attribute

(c)   To listen to an event on an element

(d)   None of the above

1-e.   Choose correct directive that is used to loop through an array in a Blade template   1
(CO3, K2)

(a)   @for each

(b)   @if

(c)   @while

(d)   @switch

1-f.   Choose how you can include a sub-view within a Blade template in Laravel (CO3,   1
K3)

(a)   By using the @include directive

(b)   By using the @extends directive

(c)   By using the @yield directive

(d)   By using the @section directive

1-g.   Select that specifies a write connection in Laravel (CO4, K2)   1

(a)   By setting the 'write' attribute to true in the database configuration file

(b)   By setting the 'read' attribute to false in the database configuration file

(c)   By specifying a 'write' key in the array of database connections in the database
configuration file

(d)   None of the above

1-h.   Select the correct statement to use multiple read connections in Laravel (CO4, K2)   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.   Does autoloader optimization in Laravel Forge work for all PHP applications.   1
(CO5, K2)

(a)   Yes, it works for all PHP applications

(b)   No, it only works for Laravel applications

(c)   No, it only works for WordPress applications

(d)   Yes, it only works for WordPress applications

1-j.   Choose the correct default location of the optimized autoload files in Laravel   1
Forge. (CO5, K2)

(a)   /vendor/autoload.php

(b)   /vendor/composer/autoload.php

(c)   /vendor/composer/autoload_real.php

(d)   None of these

2. Attempt all parts:-

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2.a.	Define the steps that are used to resolve dependencies in constructor injection. (CO1, K3)	2
2.b.	Describe some best practices for designing user interfaces that effectively handle user inputs. (CO2, K3)	2
2.c.	Discuss how you can customize the data generated by Laravel Faker. (CO3, K5)	2
2.d.	Define Database Transaction in Laravel. (CO4, K2)	2
2.e.	Discuss how you can optimize autoloading in a Laravel application. (CO5, K2)	2

SECTION-B   30

3. Answer any <u>five</u> of the following:-

3-a.	Explain the working Laravel's middleware system work, and what are some common use cases for middleware. (CO1, K3)	6
3-b.	Explain the purpose of the storage directory in Laravel, and how can you use it to store files or cache data. (CO1, K3)	6
3-c.	Discuss the purpose of the "props" property in an Inertia.js response. Give an example of how you would use it in your application. (CO2, K4)	6
3-d.	Explain that how does Inertia.js handle validation errors in form submissions. (CO2, K2)	6
3.e.	Discuss Repository pattern in Laravel and how is it used. (CO3, K2)	6
3.f.	Identify the difference between using the file_put_contents function and the Storage facade to write data to a file in Laravel. (CO4, K2)	6
3.g.	Explain some common deployment tools and technologies that is used in deploying Laravel applications to production (CO5, K4)	6

SECTION-C   50

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

4-a.	Create a Terminable Middleware in Laravel that manipulates the HTTP response object before it is sent back to the client. Your middleware should perform some task such as adding headers, modifying the response body, or redirecting the user to a different page. (CO1, K5)	10
4-b.	Develop a basic Laravel application that utilizes the configuration settings to customize its behaviour. For example, you can create an application that allows users to upload and download files to a specific directory. (CO1, K5)	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, K4)	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, K3)	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	10

for these fields. (CO3, K5)

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, K4)	10

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

7-a.	Show the steps to leverage Laravel's migration rollback capabilities to undo schema changes or address errors encountered during migration execution. (CO4, K4)	10
7-b.	Explain some advanced migration techniques, such as using raw SQL in migrations or seeding initial data after table creation. (CO4, K5)	10

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

8-a.	Explain how you can use the Blade template engine in Laravel to optimize view loading times. Discuss features such as template inheritance, section, and component that can help you to reduce code duplication and improve the performance of your Laravel application. Also, provide examples of how to use these features in Laravel. (CO5, K5)	10
8-b.	Explain PDO Server in Laravel. Discuss its role and importance in Laravel deployment. Also, explain how you can use PDO Server in Laravel to improve database performance and security. (CO5, K4)	10