NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM:VI CARRY OVER THEORY EXAMINATION-AUGUST 2023

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.*

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SECTION A   20

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1. Attempt all parts:-

1-a.   Select the correct method that is used to register a Middleware in Laravel.   1
(CO1)

     (a) The registerMiddleware() method in the App\Http\Kernel class

     (b) The app()->middleware() function in the bootstrap/app.php file

     (c) The useMiddleware() method in the route definition

     (d) The middleware() method in the controller constructor

1-b.   Select the correct option that which frontend framework is used by Laravel   1
Jetstream. (CO1)

     (a) React

     (b) Angular

     (c) Vue.js

     (d) none

1-c.   Select the benefit of using Inertia.js. (CO2)   1

     (a) Faster initial page load times

(b) Easier integration with third-party libraries

(c) More control over the user interface rendering

(d) Better compatibility with older browsers

1-d. Select the HTTP method which is used to submit data to a server in Inertia.js. (CO2) 1

      (a) GET

      (b) POST

      (c) PUT

      (d) DELETE

1-e. Select the design pattern that is used by Laravel's Facade pattern. (CO3) 1

      (a) Singleton pattern

      (b) Adapter pattern

      (c) Decorator pattern

      (d) Observer pattern

1-f. Choose the correct method that is used to validate the request data in Laravel. (CO3) 1

      (a) validate()

      (b) request()

      (c) input()

      (d) all()

1-g. In Laravel, select a method that is used to listen for query events. (CO4) 1

      (a) listen()

      (b) on()

      (c) bind()

      (d) register()

1-h. Choose method that you can use to run a group of database operations as a single transaction in Laravel. (CO4) 1

      (a) DB::transaction()

      (b) DB::groupTransaction()

      (c) DB::batchTransaction()

      (d) DB::bundleTransaction()

1-i. Choose benefits of deploying Laravel applications with Vapor. (CO5) 1

      (a) Automatic scaling and load balancing

(b) Easy deployment with one-click deployment

(c) Reduced server maintenance and management

(d) All of the above

1-j.	Select the command that is used to generate a new Laravel migration file. (CO5)	1

(a) php artisan generate:migration

(b) php artisan migration:make

(c) laravel make:migration

(d) php make:migration

2. Attempt all parts:-

2.a.	Explain routing in Laravel. (CO1)	2
2.b.	Explain that how does Inertia handle server-side validation errors. (CO2)	2
2.c.	Discuss different types of data that can be generated using Laravel Faker. (CO3)	2
2.d.	Write some of the popular databases supported by Laravel out of the box. (CO4)	2
2.e.	Discuss the purpose of the BCMath extension in PHP. (CO5)	2

SECTION B — 30

3. Answer any five of the following:-

3-a.	Explain the system requirements for installing and running Laravel. (CO1)	6
3-b.	Elaborate security features provided by Laravel, such as authentication and authorization, and how do they work. (CO1)	6
3-c.	Explain VueDevtools and what are its benefits for Vue.js developers. (CO2)	6
3-d.	Explain the purpose of the Inertia.js protocol. (CO2)	6
3.e.	Explain the benefits of laravel application using Artisan commands. (CO3)	6
3.f.	Explain about performing conditional validation based on user input in Laravel. (CO4)	6
3.g.	Explain how you can optimize the performance of your Laravel application. (CO5)	6

SECTION C — 50

4. Answer any one of the following:-

4-a.	Define Laravel and what are some of its key features that make it a popular PHP framework for web development. (CO1)	10
4-b.	Discuss the various benefits of using Implicit Controllers, such as reducing the	10

number of files and classes required, simplifying the routing configuration, and providing a consistent API for resourceful actions. (CO1)

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

5-a. Explain VueDevtools and how can it be useful in Vue.js development. Describe its main features and how they can help in debugging and optimizing Vue.js applications. (CO2) | 10

5-b. You have a Vue.js app that displays a list of products on the screen. Each product object in the list has a "name" and "price" property. You want to display the total price of all products on the screen. Write a Vue.js method that calculates the total price of all products and returns it to the template. (CO2) | 10

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

6-a. Discuss how you can restrict access to certain pages or routes to only authenticated users, and redirect them to the login page if they're not authenticated. (CO3) | 10

6-b. 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

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

7-a. Elaborate the process for setting up a database connection in Laravel, and the required configuration settings that need to be defined in Laravel's configuration files. (CO4) | 10

7-b. Explain query logging in Laravel and how can it be used to monitor and optimize database interactions in a Laravel application. (CO4) | 10

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

8-a. Define some best practices for deploying a Laravel application to a cloud-based hosting provider like AWS or Azure. (CO5) | 10

8-b. Discuss different techniques that you can use to optimize the loading of CSS and JavaScript files in Laravel applications. Explain how you can use the Laravel Mix package to combine, minify, and cache CSS and JavaScript files in your Laravel application. (CO5) | 10