1. What are the primary advantages of using Angular CLI for Angular 15 development?

- **A) Simplified project setup**

- **B) Automatic optimization of code**

- **D) Immediate access to testing utilities**

2. Which of the following decorators are used to define an Angular component?

- **B) @Component**

3. How can you optimize Angular 15 applications for better performance?

- **A) Use OnPush change detection strategy**

- **B) Use Lazy Loading for modules**

- **D) Use Angular Universal for server-side rendering**

4. Which of the following are valid lifecycle hooks in Angular 15?

- **A) ngOnChanges**

- **B) ngAfterViewInit**

- **C) ngOnInit**

5. In Angular 15, which of the following can trigger change detection?

- **A) User input**

- **B) HTTP request completion**

- **C) setTimeout**

6. What are the advantages of using Angular's Reactive Forms over Template-Driven Forms?

- **A) Easier unit testing**

- **B) More powerful and scalable**

- **D) Synchronous updates**

7. Which of the following are correct ways to provide a service in Angular 15?

- **A) At the root level using @Injectable({ providedIn: 'root' })**

- **B) Providing in @NgModule providers array**

8. Which of the following are true about Angular Modules?

- **A) They allow for lazy loading**

- **B) They can import other Angular modules**

- **D) They group related components, directives, and services**

9. How can you handle errors in an Angular 15 application?

- **A) Use try-catch blocks in services**

- **B) Use the ErrorHandler service**

- **C) Create custom error pages**

10. Which of the following features are supported by Angular 15 Router?

- **A) Lazy loading of modules**

- **B) Nested routes**

- **C) Route guards**

11. What are the benefits of using Angular's Dependency Injection system?

- **A) Promotes reusability**

- **B) Helps with testing and mocking dependencies**

12. In Angular 15, how can you optimize bundle size?

- **A) Use Lazy Loading**

- **B) Use Ahead of Time (AOT) compilation**

- **D) Minimize third-party libraries**

13. Which of the following are valid Angular 15 directives?

- **A) ngIf**

- **B) ngFor**

- **D) ngClass**

14. What is the purpose of Angular's HttpInterceptor?

- **A) Modifying HTTP requests globally**

- **B) Handling HTTP errors globally**

15. What are the ways to share data between components in Angular 15?

- **A) Input and Output decorators**

- **B) Services**

16. Which of the following statements are true about Angular Pipes?

- **A) They transform data in templates**

- **B) They can be either pure or impure**

17. How can you improve the security of an Angular 15 application?

- **A) Sanitize user inputs**

- **B) Use Angular's built-in XSS protection**

- **D) Implement Content Security Policy (CSP)**

18. Which of the following statements about Angular Zones is correct?

- **A) Zones help track asynchronous operations**

- **B) Zones automatically trigger change detection**

- **D) Zones can be bypassed using NgZone**

19. What are the best practices for structuring an Angular 15 project?

- **A) Feature modules for different sections of the application**

- **B) Global services provided in AppModule**

- **C) Keeping components small and focused**

20. Which of the following are correct about Angular Elements?

- **A) Angular components can be packaged as Web Components**

- **B) Angular Elements are platform-independent**

21. Which of the following are valid ways to create a new Angular 15 component using Angular CLI?

- **A) ng generate component my-component**

- **B) ng g c my-component**

22. What are the methods of handling HTTP responses in Angular 15?

- **A) Using map and catchError operators in RxJS**

- **B) Using the HttpClient's toPromise method**

- **C) Using async/await with HttpClient**

23. How can you optimize Angular 15 applications for SEO?

- **A) Using Angular Universal for server-side rendering**

- **B) Using meta tags and title service**

24. What are the features of Angular's RouterLink directive?

- **A) Binds a clickable element to a route**

- **B) Supports query parameters**

- **C) Can be used with both anchors and buttons**

25. Which of the following are correct about Angular 15 Service Workers?

- **A) They can cache application assets**

- **B) They can handle push notifications**

- **D) They are required for PWA functionality**

26. What are the differences between Template-Driven and Reactive Forms in Angular 15?

- **A) Template-Driven forms rely on directives**

- **B) Reactive Forms offer more control over form behavior**

- **C) Template-Driven forms are less scalable**

27. How can you create custom pipes in Angular 15?

- **A) Use the @Pipe decorator**

- **B) Implement the PipeTransform interface**

- **C) Register the pipe in a module's declarations array**

28. Which of the following are valid use cases for Angular's Content Projection?

- **A) Passing template fragments from parent to child components**

- **B) Using multiple <ng-content> slots**

29. What are the benefits of using Angular's ViewEncapsulation?

- **A) Prevents styles from leaking into other components**

- **D) Encapsulates styles within the component**

30. Which of the following are features of Angular 15's AOT compilation?

- **A) Faster rendering in the browser**

- **B) Smaller bundle sizes**

- **C) Improved security against injection attacks**

31. What are the advantages of using Angular's Angular Universal?

- **A) Improves SEO by enabling server-side rendering**

- **B) Reduces the initial load time of the application**

32. Which of the following are supported by Angular 15's router guards?

- **A) CanActivate**

- **B) CanDeactivate**

- **C) CanLoad**

33. What are the key benefits of Angular Ivy in Angular 15?

- **A) Smaller bundle sizes**

- **B) Faster compilation and build times**

- **C) Easier debugging with improved stack traces**

34. How can you implement lazy loading in Angular 15?

- **A) Using the loadChildren property in the route configuration**

- **B) Using dynamic imports**

35. Which of the following Angular 15 features help in managing application state?

- **A) Services with BehaviorSubject**

- **B) NgRx Store**

- **C) Component's local state**

36. What are the advantages of using Angular's Reactive Extensions (RxJS)?

- **A) Declarative handling of asynchronous operations**

- **B) Support for complex event streams**

- **C) Improved memory management with operators like takeUntil**

37. What are the best practices for handling forms in Angular 15?

- **A) Use Reactive Forms for complex forms**

- **B) Validate forms using built-in validators**

- **C) Use custom validators for business logic**

38. Which of the following statements about Angular's Change Detection Strategy are true?

- **A) Default strategy checks all components in a tree**

- **B) OnPush strategy checks only when input properties change**

- **C) Change detection can be manually triggered**

39. How can Angular's Renderer2 be used in Angular 15?

- **A) To manipulate DOM elements safely**

- **B) To create elements dynamically**

- **D) To apply styles to elements**

40. Which of the following are correct about Angular's template-driven forms?

- **A) Forms are created using Angular directives**

41. What are the ways to implement route guards in Angular 15?

- **A) Using CanActivate interface**

- **B) Using CanDeactivate interface**

- **C) Using AuthGuard services**

42. Which of the following are correct about Angular's structural directives?

- **A) They manipulate the DOM layout**

- **B) They do not modify the component's data model**

43. How can you handle asynchronous operations in Angular 15?

- **A) Using Observables**

- **B) Using Promises**

- **C) Using async/await syntax**

44. What are the key benefits of Angular's Dependency Injection system?

- **A) Reduces code coupling**

- **B) Simplifies service instantiation**

- **C) Enhances testability**

45. Which of the following are correct ways to unsubscribe from Observables in Angular 15?

- **A) Use the takeUntil operator**

- **B) Manually call unsubscribe in ngOnDestroy**

- **C) Use the async pipe in templates**

46. How can you implement content projection in Angular 15?

- **A) Use the <ng-content> tag**

- **B) Pass templates from parent to child components**

47. Which of

 the following are true about Angular 15's Event Binding?

- **A) Binds event handlers to DOM events**

- **B) Supports custom event creation**

- **D) Can be combined with data binding**

48. How can Angular's Injector be used in Angular 15?

- **A) To manually instantiate services**

- **B) To provide services dynamically**

49. Which of the following are valid ways to work with Angular 15 animations?

- **A) Use Angular's built-in animation API**

- **B) Create animations using CSS**

- **D) Define animations in the component metadata**

50. What are the common practices for optimizing Angular 15 application performance?

- **A) Lazy loading routes and modules**

- **B) Implementing AOT compilation**

- **D) Using trackBy with ngFor**