1. What is Spring Security?

Interview answer:
“Spring Security is a framework that provides authentication, authorization, and protection against common security threats for Spring applications.”

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2. What problems does Spring Security solve?

Interview answer:
“It handles login, role-based access control, session management, CSRF protection, and secure API access.”

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3. What is Authentication and Authorization?

Interview answer:
“Authentication verifies who the user is, while authorization determines what the user is allowed to access.”

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4. How does Spring Security work internally?

Interview answer:
“It works using a chain of security filters that intercept requests before reaching the controller.”

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5. What is SecurityFilterChain?

Interview answer:
“SecurityFilterChain defines how incoming requests are secured and which filters apply to them.”

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6. What is DelegatingFilterProxy?

Interview answer:
“It connects the Servlet container’s filter mechanism with Spring-managed security filters.”

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7. What is UsernamePasswordAuthenticationFilter?

Interview answer:
“It handles authentication requests by extracting username and password from the login request.”

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8. What is AuthenticationManager?

Interview answer:
“AuthenticationManager is responsible for processing authentication requests.”

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9. What is AuthenticationProvider?

Interview answer:
“AuthenticationProvider contains the actual authentication logic, like validating credentials against a database.”

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10. What is UserDetailsService?

Interview answer:
“UserDetailsService loads user information from a data source for authentication.”

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11. What is UserDetails?

Interview answer:
“UserDetails represents authenticated user information such as username, password, and roles.”

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12. What is PasswordEncoder?

Interview answer:
“PasswordEncoder is used to securely hash and verify passwords.”

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13. Why should passwords not be stored in plain text?

Interview answer:
“Storing plain text passwords is insecure; hashing ensures passwords cannot be easily retrieved even if data is compromised.”

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14. What is Authorization in Spring Security?

Interview answer:
“Authorization is implemented using roles and authorities to control access to endpoints.”

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15. Difference between ROLE and Authority?

Interview answer:
“ROLE is a special type of authority prefixed with ‘ROLE_’, used for role-based access control.”

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16. What is @EnableWebSecurity?

Interview answer:
“It enables Spring Security configuration for a Spring Boot application.”

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17. What is HttpSecurity?

Interview answer:
“HttpSecurity is used to configure security rules like login, logout, CORS, and CSRF.”

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18. How do you secure REST APIs in Spring Boot?

Interview answer:
“By using stateless authentication like JWT and disabling session-based authentication.”

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19. What is CSRF?

Interview answer:
“CSRF is a security attack where a malicious site forces a logged-in user to perform unwanted actions.”

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20. When should CSRF be disabled?

Interview answer:
“CSRF can be disabled for stateless REST APIs that use tokens like JWT.”

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21. What is CORS?

Interview answer:
“CORS controls cross-origin requests between frontend and backend hosted on different domains.”

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22. How is CORS handled in Spring Security?

Interview answer:
“Using `@CrossOrigin` or global CORS configuration in Spring Security.”

23. What is JWT?

Interview answer:
“JWT is a token-based authentication mechanism where user details are stored in a signed token.”

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24. Why JWT over session-based authentication?

Interview answer:
“JWT is stateless, scalable, and suitable for microservices and distributed systems.”

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25. What is OncePerRequestFilter?

Interview answer:
“It ensures a filter executes only once per request, commonly used for JWT validation.”

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26. What is @PreAuthorize?

Interview answer:
“@PreAuthorize is used for method-level security based on roles or conditions.”

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27. Difference between @Secured and @PreAuthorize?

Interview answer:
“@PreAuthorize is more flexible and supports SpEL expressions, while @Secured is simpler.”

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28. What is Session Management in Spring Security?

Interview answer:
“It manages user sessions including session creation, invalidation, and concurrent session control.”

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29. How do you handle logout in Spring Security?

Interview answer:
“By configuring logout URL and invalidating session or token.”

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30. Real-time use of Spring Security in projects?

Interview answer:
“Spring Security is used to secure REST APIs, implement JWT authentication, role-based access control, and protect applications from common vulnerabilities.”