

Here's a comprehensive list of **50 real-time Playwright interview questions with answers**, grouped into relevant categories.

1 Basics of Playwright

Q1: What is Playwright?

- Playwright is an open-source automation testing tool for modern web applications that supports multiple browsers like Chromium, Firefox, and WebKit.

Q2: How does Playwright differ from Selenium?

- Playwright supports modern web features (e.g., shadow DOM, web sockets) better and has built-in browser support, while Selenium is a more mature tool with broader community support.

Q3: What languages does Playwright support?

- Playwright supports JavaScript, TypeScript, Python, C#, and Java.

Q4: How do you install Playwright in a project?

- Use `npm install playwright` for JavaScript/TypeScript projects or `pip` for Python: `pip install playwright`.

Q5: What are the supported browsers in Playwright?

- Chromium, Firefox, and WebKit.
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2 Core Playwright Features

Q6: How do you launch a browser in Playwright?

```
const { chromium } = require('playwright');
const browser = await chromium.launch();
```

Q7: How do you handle multiple browser contexts?

- Create independent browser contexts using `browser.newContext()`.

Q8: What is the difference between `page.goto()` and `page.navigate()`?

- `page.goto()` is the standard method for navigating to a URL; Playwright doesn't have a `page.navigate()` method.

Q9: How do you capture a screenshot in Playwright?

```
await page.screenshot({ path: 'example.png' });
```

Q10: How do you work with iframes in Playwright?

```
const frame = page.frame({ name: 'frame-name' });
await frame.click('button');
```

3 Handling Elements

Q11: How do you handle dynamic elements in Playwright?

- Use selectors with robust patterns and `await page.waitForSelector()` to wait for the element.

Q12: How do you handle dropdowns?

```
await page.selectOption('#dropdown', 'value');
```

Q13: How do you handle checkboxes and radio buttons?

- Use `page.check()` for checkboxes and `page.click()` for radio buttons.

Q14: How do you assert an element's text?

```
const text = await page.textContent('.selector');
expect(text).toBe('Expected Text');
```

Q15: How do you handle file uploads in Playwright?

```
await page.setInputFiles('#upload', 'path/to/file');
```

4 Advanced Scenarios

Q16: How do you handle multiple tabs in Playwright?

- Use `browserContext.on('page')` to listen for new tabs and interact with them.

Q17: How do you intercept network requests in Playwright?

```
await page.route('**/api/**', route => route.abort());
```

Q18: How do you handle timeouts in Playwright?

- Set a timeout using `page.setDefaultTimeout(milliseconds)`.

Q19: How do you handle authentication in Playwright?

- Use browser contexts to store authentication state with cookies or storage.

Q20: Can Playwright handle mobile testing?

- Yes, use the `devices` library to emulate mobile devices.

5 Debugging and Reporting

Q21: How do you debug Playwright scripts?

- Use `page.pause()` or run with the `PWDEBUG=1` environment variable.

Q22: How do you generate Playwright trace reports?

```
await context.tracing.start({ screenshots: true, snapshots: true });
await context.tracing.stop({ path: 'trace.zip' });
```

Q23: How do you capture console logs?

```
page.on('console', msg => console.log(msg.text()));
```

Q24: How do you retry failed tests in Playwright?

- Use the `retries` option in the Playwright configuration file.

Q25: How do you integrate Playwright with reporting tools?

- Use third-party libraries like Allure or custom hooks to generate reports.

6 Performance and CI/CD

Q26: How do you measure page load performance in Playwright?

- Use the `page.metrics()` API for performance insights.

Q27: How do you run Playwright in headless mode?

- Set `headless: true` in `chromium.launch()`.

Q28: How do you integrate Playwright into a Jenkins pipeline?

- Add a Playwright script execution step in the pipeline configuration file.

Q29: Can Playwright tests be parallelized?

- Yes, use Playwright's built-in parallelism by configuring the `workers` parameter.

Q30: How do you run Playwright tests in Docker?

- Use the official Playwright Docker image to set up the environment.
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7 General Best Practices

Q31: What are some best practices for writing Playwright scripts?

- Use reusable functions, robust locators, and implement error handling.

Q32: How do you handle flaky tests?

- Add retries, explicit waits, and debug using Playwright trace viewer.

Q33: What is the difference between `await page.waitForSelector()` and `await page.waitForTimeout()`?

- `waitForSelector()` waits for an element to appear; `waitForTimeout()` pauses for a specific time.

Q34: How do you run Playwright tests in multiple browsers?

- Configure the `projects` parameter in the Playwright configuration.

Q35: What is the role of browser contexts in Playwright?

- Browser contexts allow isolated execution for different sessions in the same browser instance.

8 Miscellaneous Questions

Q36: How do you handle SSL certificates in Playwright?

- Use `ignoreHTTPSErrors: true` in the browser context configuration.

Q37: Can Playwright handle Shadow DOM elements?

- Yes, Playwright can locate and interact with shadow DOM elements.

Q38: How do you handle alerts and pop-ups in Playwright?

```
page.on('dialog', dialog => dialog.accept());
```

Q39: What are some challenges you faced using Playwright?

- Challenges include flaky network tests, managing timeouts, and handling dynamic elements.

Q40: How do you set up test retries in Playwright?

- Add the `retries` parameter in the Playwright configuration file.

9 Playwright Configuration

Q41: How do you configure Playwright for cross-browser testing?

- Define multiple projects in the configuration for browsers like Chromium, Firefox, and WebKit.

Q42: How do you manage environment variables in Playwright?

- Use `.env` files with libraries like dotenv.

Q43: How do you handle slow network simulations?

```
await page.route('**/*', route => route.continue({ delay: 3000 }));
```

Q44: How do you disable images in Playwright?

```
await page.route('**/*.{png,jpg}', route => route.abort());
```

10 Advanced Concepts

Q45: Can Playwright handle APIs directly?

- Yes, use `request` objects for API testing in Playwright.

Q46: How do you handle browser events in Playwright?

- Listen for events like `page.on('load')` or `page.on('request')`.

Q47: How do you set up localization testing in Playwright?

- Set `locale` in the browser context.

Q48: How do you emulate network conditions in Playwright?

- Use `page.setOffline()` or throttle network conditions in routes.

Q49: How do you use custom locators in Playwright?

- Extend locators with `page.locator()` and custom logic.

Q50: How do you integrate Playwright with TestNG or JUnit?

- Use Playwright Java bindings and invoke Playwright methods in your test scripts.

This list should cover all major areas for Playwright interviews!