

Absolutely! Based on real-world experience with **K6 for performance testing**, here's a curated list of **important interview questions**—ranging from basics to advanced concepts—frequently asked in interviews. These cover both **theoretical understanding** and **hands-on experience**.

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## Basic Level Questions

### 1. What is K6 and why is it used?

- Explain K6 as a developer-centric load testing tool written in Go with tests scripted in JavaScript.
- Mention CLI-based, scriptable, and automation-friendly.

### 2. How do you install and run a K6 script?

- Explain using `brew install k6` or direct binary.
- Running: `k6 run script.js`

### 3. What are the stages in K6?

```
stages: [  
  { duration: '2m', target: 50 },  
  { duration: '5m', target: 50 },  
  { duration: '2m', target: 0 },  
]
```

### 4. What are virtual users (VUs) in K6?

### 5. Difference between VUs and iterations in K6?

### 6. How to define thresholds in K6 and what are they used for?

```
thresholds: {  
  http_req_duration: ['p(95)<500'], // 95% requests should complete under 500ms  
}
```

## 7. How can you send an HTTP POST request in K6?

```
http.post('https://api.example.com/login', JSON.stringify(payload), {  
  headers: { 'Content-Type': 'application/json' },  
});
```

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## Intermediate Level Questions

### 8. Explain setup() and teardown() in K6.

### 9. What are checks and how do you use them?

```
check(res, {  
  'status is 200': (r) => r.status === 200,  
});
```

### 10. How do you use groups in K6 and why?

```
group('Login API Test', function () {  
  // steps here  
});
```

### 11. What is the difference between options vus and options stages?

## 12. How do you parameterize a K6 test script?

- Using external files (CSV/JSON)
- Environment variables

## 13. How to pass dynamic data or randomize inputs in K6?

- `__VU`, `__ITER`, faker libraries, etc.
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## Advanced/Real-Time Project Questions

## 14. How do you handle authentication in K6 (like Bearer tokens, cookies)?

## 15. Have you integrated K6 in CI/CD pipelines? How?

- Jenkins, GitHub Actions, GitLab CI
- Use `k6 run` in pipeline scripts
- Output results in JSON for reporting

## 16. What types of performance tests have you done using K6?

- Load, Stress, Soak, Spike, Scalability tests

## 17. How do you analyze and report K6 test results?

- CLI summary
- Export to InfluxDB + Grafana
- Output formats: JSON, CSV, etc.

## 18. What are some common performance issues you've identified using K6?

- API latency
- Memory leaks
- Throughput bottlenecks

## 19. How do you simulate different user behavior or flows?

- Use JS functions + `group()` + random data

## 20. How do you test APIs with K6 that have a large dataset or complex payloads?

- Data-driven approach using CSV/JSON + `open()` method
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## Tooling & Integration

### 21. How do you monitor K6 tests in real time?

- Use `k6 run --out influxdb=http://localhost:8086/mydb`
- Dashboards with Grafana

### 22. How do you manage test environments or configurations across multiple APIs?

- Environment variables
- Configuration files
- Separate folders for test suites

### 23. What are the limitations of K6?

- No browser-level testing

- Doesn't support WebSocket well in all cases
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## Scenario-based Questions

- 24. If an API fails under load in your K6 test, how do you debug it?
- 25. How would you test a login API and reuse the token for all subsequent calls?
- 26. How do you run a performance test with 1000 users and ramp up gradually over 10 minutes?
- 27. Can you schedule K6 tests and trigger alerts on threshold failures?
- 28. Have you created custom metrics in K6?

```
import { Trend } from 'k6/metrics';
```

```
const myTrend = new Trend('response_time');
```

```
myTrend.add(res.timings.duration);
```

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## Bonus Tips for Interviews

- Share your **GitHub** or **project repo** with sample test cases.
  - Show knowledge of how K6 compares with other tools like **JMeter**, **Locust**, or **Gatling**.
  - If you've used **cloud options** like K6 Cloud or Testkube, mention that!
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If you want, I can create a **PDF cheat sheet** or **real-time project scenario-based questions** too. Want me to do that?