**MCQ Questions - Intel VTune**

1. What is the primary purpose of hotspot analysis in Intel VTune Profiler?

a) Debugging code

b) Identifying memory leaks

c) Identifying sections of code where most CPU time is spent

d) Monitoring network traffic

2. What are "hotspots" in the context of Intel VTune Profiler?

a) Errors in the code

b) Sections of code that consume most of the CPU time

c) Memory allocation issues

d) Network latency issues

3. How can optimizing hotspots improve an application?

a) By increasing network speed

b) By reducing memory usage

c) By significantly improving overall performance

d) By fixing bugs

4. What type of insights does VTune provide?

a) Network performance insights

b) Detailed insights into where the application spends most of its time

c) Insights into database queries

d) Security vulnerabilities

5. How does better utilization of CPU resources help an application?

a) Reduces power consumption

b) Improves network performance

c) Enhances efficiency and responsiveness

d) Increases memory usage

6. What is one of the main benefits of identifying performance bottlenecks?

a) Reduced code complexity

b) Improved documentation

c) Enhanced application efficiency

d) Increased code size

7. What does VTune monitor to gather performance data?

a) Disk usage

b) Network traffic

c) CPU activity

d) User input

8. Which mode in VTune periodically interrupts the application to collect CPU state?

a) Debugging Mode

b) Tracing Mode

c) Sampling Mode

d) Profiling Mode

10. What does Tracing Mode in VTune do?

a) Periodically interrupts the application

b) Instruments the application to capture detailed events

c) Monitors disk usage

d) Captures user input

12. How does VTune rank hotspots?

a) Alphabetically

b) Based on memory usage

c) Based on their CPU usage

d) Randomly

13. What command is used to collect hotspot data in VTune through the command line?

a) vtune --collect=memory --result-dir=./report -- ./mmult\_serial

b) vtune --collect=hotspot --result-dir=./report -- ./mmult\_serial

c) vtune --collect=network --result-dir=./report -- ./mmult\_serial

d) vtune --collect=io --result-dir=./report -- ./mmult\_serial

14. After collecting data, which command is used to view the VTune report?

a) vtune-gui report.vtune

b) vtune-view report.vtune

c) vtune-display report.vtune

d) vtune-analyze report.vtune

16. Which view in the VTune report focuses on the contribution of individual functions?

a) Bottom-up view

b) Caller-callee view

c) Top-down view

d) Flat view

20. Why is it important to identify hotspots in an application?

a) To increase code readability

b) To improve network performance

c) To prioritize optimization efforts for substantial performance gains

d) To enhance security features