**MCQ Questions - Intel offload advisor**

1. What is the primary purpose of the Intel Offload Advisor?

A) Measure power consumption

B) Identify code errors

C) Find opportunities to offload/run your code on a target GPU

D) Optimize memory allocation

2. Which step in the Offload Modeling perspective involves getting the baseline performance data for your application?

A) Performance Modeling

B) Dependencies analysis

C) Survey analysis

D) Characterization analysis

3. In the context of Intel Offload Advisor, what does "CPU Utilization" refer to?

A) The amount of memory used by the CPU

B) The percentage of time the CPU spends processing instructions

C) The energy consumed by the CPU

D) The temperature of the CPU

4. Which of the following is NOT a step in the Offload Modeling perspective?

A) Survey analysis

B) Characterization analysis

C) Dependencies analysis

D) Code refactoring

5. What does the Characterization analysis step identify?

A) Loops recommended for offloading

B) Cache and memory traffics on the target device

C) Data transfer patterns

D) Execution time of functions

6. The command `advisor --collect=offload --config=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial` is used for:

A) Estimating power consumption

B) Modeling application performance on a target GPU

C) Profiling memory usage

D) Identifying coding errors

7. What is estimated in the Performance Modeling step?

A) Total power consumption

B) Execution time of functions

C) Total program speedup on a target device

D) Memory allocation patterns

8. What does the command `advisor --collect=survey --auto-finalize --static-instruction-mix --project-dir=./mmul\_report -- ./mmult\_serial` perform?

A) Dependencies analysis

B) Characterization analysis

C) Survey analysis

D) Performance modeling

9. Which command option specifies the target device configuration?

A) --project-dir

B) --config

C) --collect

D) --dry-run

10. What does the Dependencies analysis step identify?

A) Kernels invoked and executed

B) Loop-carried dependencies blocking parallel execution

C) Cache and memory traffic on target device

D) Data transfer patterns

11. The command `advisor --collect=tripcounts --flop --stacks --auto-finalize --cache-simulation=single --data-transfer=light --target-device=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial` is used for:

A) Survey analysis

B) Dependencies analysis

C) Characterization analysis

D) Performance modeling

12. What does the `--dry-run` option do in the Intel Offload Advisor command?

A) Executes the application without any analysis

B) Simulates/Shows the command without executing the application

C) Runs the application in debug mode

D) Collects memory usage statistics

13. The command `advisor --collect=offload --dry-run --config=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial` will execute which internal command(s) first?

A) survey, tripcounts, and projection

B) projection only

C) tripcounts only

D) characterization only

14. What is the function of the `--project-dir` option?

A) Sets the accuracy level

B) Specifies the directory for the project reports

C) Defines the target device

D) Chooses the type of analysis to run

15. Which of the following workflows does the Intel Offload Advisor support?

A) CPU-to-GPU offload modeling only

B) GPU-to-GPU offload modeling only

C) CPU-to-GPU and GPU-to-GPU offload modeling

D) CPU-to-CPU offload modeling

16. To ensure the highest level of detailed analysis, which accuracy level should be used?

A) Low Accuracy

B) Medium Accuracy

C) High Accuracy

D) Moderate Accuracy

17. What is the default accuracy level in Intel Offload Advisor?

A) Low

B) Medium

C) High

D) Custom

18. Which command option is used to specify the accuracy level in Intel Offload Advisor?

A) --project-dir

B) --config

C) --collect

D) --accuracy

19. What type of analysis does the `advisor --collect=projection --no-assume-dependencies --config=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial` command perform?

A) Survey analysis

B) Characterization analysis

C) Dependencies analysis

D) Performance Modeling

20. Which of the following is an example of a data transfer pattern analyzed by Intel Offload Advisor?

A) Loop iteration count

B) Kernel execution time

C) Data transfer between host and target devices

D) Instruction mix

21. In which step does Intel Offload Advisor identify loop-carried dependencies that might block parallel execution?

A) Survey analysis

B) Characterization analysis

C) Dependencies analysis

D) Performance Modeling

22. What does the `--collect=tripcounts` option in Intel Offload Advisor analyze?

A) Loop iteration counts and function call counts

B) Kernel execution time

C) Data transfer patterns

D) Memory allocation

23. Which command is used for profiling an application running on a CPU and modeling its performance on a target GPU device?

A) advisor --collect=offload --config=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial

B) advisor --collect=offload --dry-run --config=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial

C) advisor --collect=survey --auto-finalize --static-instruction-mix --project-dir=./mmul\_report -- ./mmult\_serial

D) advisor --collect=tripcounts --flop --stacks --auto-finalize --cache-simulation=single --data-transfer=light --target-device=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial

24. Which command would you use to perform a dry run of the offload analysis?

A) advisor --collect=offload --config=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial

B) advisor --collect=offload --dry-run --config=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial

C) advisor --collect=survey --auto-finalize --static-instruction-mix --project-dir=./mmul\_report -- ./mmult\_serial

D) advisor --collect=tripcounts --flop --stacks --auto-finalize --cache-simulation=single --data-transfer=light --target-device=gen11\_icl --project-dir=./mmul\_report -- ./mmult\_serial

25. Which of the following is a key factor in determining if a region of code is profitable for offloading?

A) Execution time on the target device is less than on the host

B) Execution time on the host is less than on the target device

C) Memory usage on the host

D) Number of function calls