Quiz Questions for Module 20

1. In comparing OpenCL and CUDA, which of the following is not a valid comparison?

    a. A compute unit in OpenCL is like a streaming processor in CUDA
    b. An NDRange in OpenCL is like a grid in CUDA
    c. A work-item in OpenCL is like a thread in CUDA
    d. A work-group in OpenCL is like a thread block in CUDA

    Answer: A.
    Explanation: A Compute Unit in OpenCL corresponds to a streaming multiprocessor in CUDA.

2. In comparing OpenCL and CUDA, which of the following is not a valid comparison?

    a. get_local_id(0) in OpenCL is like threadIdx.x in CUDA
    b. get_local_id(1) in OpenCL is like threadIdx.y in CUDA
    c. get_local_size(0) in OpenCL is like blockDim.x in CUDA
    d. get_global_size(0) in OpenCL is like gridDim.x in CUDA

    Answer: D.
    Explanation: get_global_size(0) is like gridDim.x*blockDim.x in CUDA

3. In comparing OpenCL and CUDA, which of the following is not a valid comparison?

    a. clCreateBuffer(…) in OpenCL is like cudaMalloc(…) in CUDA
    b. clEnqueueReadBuffer() in OpenCL is like cudaMemcpy(…) in CUDA
    c. clEnqueueWriteBuffer(…) in OpenCL is like cudaMemset(…) in CUDA
    d. clReleaseMemObject(…) in OpenCL is like cudaFree(…) in CUDA

    Answer: C
    Explanation: dlEnqueueWriteBuffer(…) in OpenCL is like cudaMemcpy(…) in CUDA

4. Which of the following statements about OpenCL is not true?

    a. Whenever an OpenCL buffer is created with clCreateBuff(), it is created in all devices in the specified context.
    b. Input arguments to an OpenCL kernel must be passed in the dlEnqueuKernel() call.
    c. OpenCL kernels are compiled with the clBuildProgram() call.
    d. OpenCL kernels are declared with the __kernel keyword.

    Answer: B
    Explanation: Input arcguments to OpenCL kernels are passed with clSetKernelArg() calls.