High Performance Computing (HPC) MCQs [set-8]

176. The style of parallelism supported on GPUs is best described as

A. misd - multiple instruction single data

B. simt - single instruction multiple thread

C. sisd - single instruction single data

D. mimd

Answer: B

177. True or false: Functions annotated with the __global__ qualifier may be executed on the host or the device

A. true

B. false

Answer: A

178. Which of the following correctly describes a GPU kernel

A. a kernel may contain a mix of host and gpu code

B. all thread blocks involved in the same computation use the same kernel

C. a kernel is part of the gpu\s internal micro-operating system, allowing it to act as in independent host

D. kernel may contain only host code

Answer: B

179. a code known as grid which runs on GPU consisting of a set of

A. 32 thread

B. unit block

C. 32 block

D. thread block

Answer: D

180. which of the following is not an parallel algorithm model

A. data parallel model

B. task graph model

C. task model

D. work pool model

Answer: C

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181. Having load before the store in a running program order, then interchanging this order, results in a

A. waw hazards

B. destination registers

C. war hazards

D. registers

Answer: C

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182. model based on the passing of stream of data through process arranged in a succession is called as

A. producer consumer model

B. hybrid model

C. task graph model

D. work pool model

Answer: A

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183. When instruction i and instruction j are tends to write the same register or the memory location, it is called

A. input dependence

B. output dependence

C. ideal pipeline

D. digital call

Answer: B

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184. Multithreading allowing multiple-threads for sharing the functional units of a

A. multiple processor

B. single processor

C. dual core

D. corei5

Answer: B

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185. Allowing multiple instructions for issuing in a clock cycle, is the goal of

A. single-issue processors

B. dual-issue processors

C. multiple-issue processors

D. no-issue processors

Answer: C

186. OpenGL stands for:

A. open general liability

B. open graphics library

C. open guide line

D. open graphics layer

Answer: B

187. which of the following is not an advantage of OpenGL

A. there is more detailed documentation for opengl while other api\s don\t have such detailed

documentation.

B. opengl is portable.

C. opengl is more functional than any other api.

D. it is not a cross-platform api,

Answer: D

188. work pool model uses ---------------- approach for task assignment

A. static

B. dynamic

C. centralized

D. decentralized

Answer: B

189. which of the following is false regarding data parallel model

A. all task perform same computations

B. degree of parallelism increase with size of problem

C. matrix multiplication is example of data parallel computations

D. dynamic mapping is done

Answer: D

190. which of the following are methods for containing interaction overheads

A. maximizing data locality

B. minimize volumn of data exchange

C. min frequency of interactions

D. all the above

Answer: D

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191. which of the following are classes of dynamic mapping centralized method

A. self scheduling

B. chunk scheduling

C. both a and b

D. none of the above

Answer: C

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192. which of the following is not scheme for static mapping

A. block distribution

B. block cyclic distributions

C. cyclic distributions

D. self scheduling

Answer: D

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193. A pipeline is like ....

A. an automobile assembly line

B. house pipeline

C. both a and b

D. a gas line

Answer: A

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194. Data hazards occur when ....

A. greater performance loss

B. pipeline changes the order of read/write access to operands

C. some functional unit is not fully pipelined

D. machine size is limited

Answer: B

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195. Systems that do not have parallel processing capabilities are

A. sisd

B. simd

C. mimd

D. all of the above

Answer: A

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196. How does the number of transistors per chip increase according to Moore´s law?

A. quadratically

B. linearly

C. cubicly

D. exponentially

Answer: D

197. Parallel processing may occur

A. in the instruction stream

B. b. in the data stream

C. both[a] and [b]

D. none of the above

Answer: C

198. Execution of several activities at the same time.

A. processing

B. parallel processing

C. serial processing

D. multitasking

Answer: B

199. Cache memory works on the principle of

A. locality of data ??

B. locality of memory

C. locality of reference ??

D. locality of reference & memory

Answer: C

200. SIMD represents an organization that _____.

A. ?? ?? ?? refers to a computer system capable of processing ???? ?? ?? ?? several programs at the same time.

B. ?? ?? ?? represents organization of single computer containing ?? ?? a control unit, processor unit and a memory unit.

C. ?? ?? ?? includes many processing units under the supervision ?? ?? ?? ?? ?? of a common control unit

D. ?? ?? ?? none of the above.

Answer: C