

# High Performance Computing (HPC) MCQs [set-14]

**326. If there is 4X4 Mesh Topology \_\_\_\_\_ message passing cycles will require complete all to all reduction.**

- A. 4
- B. 6
- C. 8
- D. 16

Answer: C

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**327. Following issue(s) is/are the true about sorting techniques with parallel computing.**

- A. large sequence is the issue
- B. where to store output sequence is the issue
- C. small sequence is the issue
- D. none of the above

Answer: B

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**328. Partitioning on series done after \_\_\_\_\_**

- A. local arrangement
- B. processess assignments
- C. global arrangement
- D. none of the above

Answer: C

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**329. In Parallel DFS processes has following roles.(Select multiple choices if applicable)**

- A. donor
- B. active
- C. idle
- D. passive

Answer: A

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**330. Suppose there are 16 elements in a series then how many phases will be required to sort the series using parallel odd-even bubble sort?**

- A. 8
- B. 4
- C. 5
- D. 15

Answer: D

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**331. Which are different sources of Overheads in Parallel Programs?**

- A. interprocess interactions
- B. process idling
- C. all mentioned options
- D. excess computation

Answer: C

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**332. The ratio of the time taken to solve a problem on a parallel processors to the time required to solve the same problem on a single processor with p identical processing elements.**

- A. the ratio of the time taken to solve a problem on a single processor to the time required to solve the same problem on a parallel computer with p identical processing elements.
- B. the ratio of the time taken to solve a problem on a single processor to the time required to solve the same problem on a parallel computer with p identical processing elements
- C. the ratio of number of multiple processors to size of data
- D. none of the above

Answer: B

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**333. CUDA helps do execute code in parallel mode using \_\_\_\_\_**

- A. cpu
- B. gpu
- C. rom
- D. cash memory

Answer: B

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**334. In thread-function execution scenario thread is a \_\_\_\_\_**

- A. work
- B. worker
- C. task

D. none of the above

Answer: B

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**335. In GPU Following statements are true**

- A. grid contains block
- B. block contains threads
- C. all the mentioned options.
- D. sm stands for streaming multiprocessor

Answer: C

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**336. Computer system of a parallel computer is capable of\_\_\_\_\_**

- A. decentralized computing
- B. parallel computing
- C. centralized computing
- D. all of these

Answer: A

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**337. In which application system Distributed systems can run well?**

- A. hpc
- B. distrubuted framework
- C. hrc
- D. none of the above

Answer: A

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**338. 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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**339. Pipeline implements ?**

- A. fetch instruction
- B. decode instruction
- C. fetch operand
- D. all of above

Answer: D

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**340. A processor performing fetch or decoding of different instruction during the execution of another instruction is called \_\_\_\_\_ ?**

- A. super-scaling
- B. pipe-lining
- C. parallel computation
- D. none of these

Answer: B

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**341. VLIW stands for ?**

- A. very long instruction word
- B. very long instruction width
- C. very large instruction word
- D. very long instruction width

Answer: A

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**342. Which one is not a limitation of a distributed memory parallel system?**

- A. higher communication time
- B. cache coherency
- C. synchronization overheads
- D. none of the above

Answer: B

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**343. Which of these steps can create conflict among the processors?**

- A. synchronized computation of local variables
- B. concurrent write
- C. concurrent read
- D. none of the above

Answer: B

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**344. Which one is not a characteristic of NUMA multiprocessors?**

- A. it allows shared memory computing
- B. memory units are placed in physically different location
- C. all memory units are mapped to one common virtual global memory
- D. processors access their independent local memories

Answer: D

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**345. Which of these is not a source of overhead in parallel computing?**

- A. non-uniform load distribution
- B. less local memory requirement in distributed computing
- C. synchronization among threads in shared memory computing
- D. none of the above

Answer: B

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**346. 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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**347. How does the number of transistors per chip increase according to Moore's law?**

- A. quadratically
- B. linearly
- C. cubically
- D. exponentially

Answer: D

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**348. Parallel processing may occur?**

- A. in the instruction stream
- B. in the data stream
- C. both[a] and [b]
- D. none of the above

Answer: C

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**349. To which class of systems does the von Neumann computer belong?**

- A. simd (single instruction multiple data)
- B. mimd (multiple instruction multiple data)
- C. misd (multiple instruction single data)
- D. sisd (single instruction single data)

Answer: D

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**350. Fine-grain threading is considered as a \_\_\_\_\_ threading?**

- A. instruction-level
- B. loop level

C. task-level

D. function-level

Answer: A

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