# PARALLEL COMPUTING BASED COMPUTER MCQ PRACTICE QUESTIONS AND ANSWERS PDF WITH EXPLANATION

**For All Competitive SSC, Bank, IBPS, UPSC, Railway, IT & Other Govt. Exams**

**Created By Careericons Team**

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**Q1.** Scalability refers to a parallel system's (hardware and/or software) ability

a) To demonstrate a proportionate increase in parallel speedup with the removal of some processors

b) To demonstrate a proportionate increase in parallel speedup with the addition of more processors

c) To demonstrate a proportionate decrease in parallel speedup with the addition of more processors

d) None of these

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**Q2.** Uniform Memory Access (UMA) referred to

a) Here all processors have equal access and access times to memory

b) Here if one processor updates a location in shared memory, all the other processors know about the update.

c) Here one SMP can directly access memory of another SMP and not all processors have equal access time to all memories

d) None of these

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**Q3.** Parallel computing can include

a) Single computer with multiple processors

b) Arbitrary number of computers connected by a network

c) Combination of both A and B

d) None of these

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**Q4.** In shared Memory

a) Changes in a memory location effected by one processor do not affect all other processors.

b) Changes in a memory location effected by one processor are visible to all other processors

c) Changes in a memory location effected by one processor are randomly visible to all other processors.

d) None of these



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## **Q5.** Collective communication

a) It involves data sharing between more than two tasks, which are often specified as being members in a common group, or collective.

b) It involves two tasks with one task acting as the sender/producer of data, and the other acting as the receiver/consumer.

c) It allows tasks to transfer data independently from one another.

d) None of these

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## **Q6.** Point-to-point communication referred to

a) It involves data sharing between more than two tasks, which are often specified as being members in a common group, or collective.

b) It involves two tasks with one task acting as the sender/producer of data, and the other acting as the receiver/consumer.*

c) It allows tasks to transfer data independently from one another.

d) None of these

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## **Q7.** Shared Memory is

a) A computer architecture where all processors have direct access to common physical memory

b) It refers to network based memory access for physical memory that is not common.

c) Parallel tasks typically need to exchange dat(A) There are several ways this can be accomplished, such as through, a shared memory bus or over a network, however the actual event of data exchange is commonly referred to as communications regardless of the method employe(D)

d) None of these

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**Q8.** Data dependence is

a) Involves only those tasks executing a communication operation

b) It exists between program statements when the order of statement execution affects the results of the program.

c) It refers to the practice of distributing work among tasks so that all tasks are kept busy all of the time. It can be considered as minimization of task idle time.

d) None of these

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**Q9.** Non-Uniform Memory Access (NUMA) is

a) Here all processors have equal access and access times to memory

b) Here if one processor updates a location in shared memory, all the other processors know about the update.

c) Here one SMP can directly access memory of another SMP and not all processors have equal access time to all memories

d) None of these

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**Q10.** In the threads model of parallel programming

a) A single process can have multiple, concurrent execution paths

b) A single process can have single, concurrent execution paths.

c) A multiple process can have single concurrent execution paths.

d) None of these

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**Q11.** Here a single program is executed by all tasks simultaneously. At any moment in time, tasks can be executing the same or different instructions within the same program. These programs usually have the necessary logic programmed into them to allow different tasks to branch or conditionally execute only those parts of the program they are designed to execute.

a) Single Program Multiple Data (SPMD)

b) Multiple Program Multiple Data (MPMD)

c) Von Neumann Architecture

d) None of these

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**Q12.** It is the simultaneous use of multiple compute resources to solve a computational problem

a) Parallel computing

b) Single processing

c) Sequential computing

d) None of these



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**Q13.** Synchronous communication operations referred to

a) Involves only those tasks executing a communication operation

b) It exists between program statements when the order of statement execution affects the results of the program.

c) It refers to the practice of distributing work among tasks so that all tasks are kept busy all of the time. It can be considered as minimization of task idle time.

d) None of these

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**Q14.** Parallel Overhead is

a) Observed speedup of a code which has been parallelized, defined as: wall-clock time of serial execution and wall-clock time of parallel execution

b) The amount of time required to coordinate parallel tasks. It includes factors such as: Task start-up time, Synchronizations, Data communications.

c) Refers to the hardware that comprises a given parallel system - having many processors

d) None of these

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## **Q15.** Domain Decomposition

a) Partitioning in that the data associated with a problem is decompose(D) Each parallel task then works on a portion of the dat(A)

b) Partitioning in that, the focus is on the computation that is to be performed rather than on the data manipulated by the computation. The problem is decomposed according to the work that must be done. Each task then performs a portion of the overall work.

c) It is the time it takes to send a minimal (0 byte) message from point A to point (B)

d) None of these

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### Answers to the above questions :

**Q1. Answer: (b)**

**Q2. Answer: (a)**

**Q3. Answer: (c)**

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**Q4. Answer: (b)**

**Q5. Answer: (a)**

**Q6. Answer: (b)**

**Q7. Answer: (a)**

**Q8. Answer: (b)**

**Q9. Answer: (c)**

**Q10. Answer: (a)**

**Q11. Answer: (a)**

**Q12. Answer: (a)**

**Q13. Answer: (a)**

**Q14. Answer: (b)**

**Q15. Answer: (a)**