Seat No -

Total number of questions : 60

11342_High Performance Computing

Time : 1hr

Max Marks : 50

N.B

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A : Mandatory Instructions/sec

B : Millions of Instructions/sec

C : Most of Instructions/sec

D : Many Instructions / sec

Q.no 2. Depth First Search is equivalent to which of the traversal in the Binary Trees?

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Q.no 3. Regarding implementation of Breadth First Search using queues, what is the maximum distance between two nodes present in the queue? (considering each edge length 1)

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C : 6

D : 8

Q.no 10. Which of the following is not an in-place sorting algorithm?

A : Selection sort

B : Heap sort

C : Quick Sort

D : Merge sort

Q.no 11. The time complexity of heap sort in worst case is

A : O(log n)

B : O(n)

C : O(nlogn)

D : O(n^2)

Q.no 12. Most message-passing programs are written using

A : the single program multiple data (SPMD) model.

B : the multiple program and single data(MPSD) model

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A : Dividing Problem statement

B : Dividing no of processors

C : Dividing number of tasks

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Q.no 14. Message-passing programs are often written using

A : symetric Paradigm

B : asymetric Paradigm

C : asynchronous paradigm

D : synchronous paradigm

Q.no 15. Following is not mapping technique

A : Static Mapping

B : Dynamic Mapping

C : Hybrid Mapping

D : All of Above

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B : Media mass

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B : When the graph is a Linked List

C : When the graph is a n-ary Tree

D : When the graph is a Ternary Tree

Q.no 21. Which of the following is not an application of Depth First Search?

A : For generating topological sort of a graph

B : For generating Strongly Connected Components of a directed graph

C : Detecting cycles in the graph

D : Peer to Peer Networks

Q.no 22. The logical view of a machine supporting the message-passing paradigm consists of p processes, each with its own _____

A : Partitioned Address space

B : Exclusive address space

C : Logical Adress Space

D : Non shared Adress Space

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B : stack

C : both program counter and stack

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C : Deadlock

D : Starvation

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A : Centralized computing

B : Decentralized computing

C : Parallel computing

D : All of Above

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C : Parallel development

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B : CPU

C : I/O

D : Memory

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C : both single threaded and multithreaded

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B : network clusters

C : both a and b

D : Beowulf clusters

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B : Shared memory

C : Message passing

D : Both A and B

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B : Bucket sort

C : Radix sort

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B : Parallelism

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A : greater than the time required to create a new process

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D : none of the mentioned

Q.no 43. RMI stands for?

A : Remote Mail InvocationRemote Message Invocation

B : Remaining Method Invention

C : Remaining Method Invocation

D : Remote Method Invocation

Q.no 44. Dynamic networks of networks, is a dynamic connection that grows is called

A : Multithreading

B : Cyber cycle

C : Internet of things

D : None of these

Q.no 45. If one thread opens a file with read privileges then _____

A : other threads in the another process can also read from that file

B : other threads in the same process can also read from that file

C : any other thread can not read from that file

D : all of the mentioned

Q.no 46. the basic operations in the message-passing programming paradigm are ___

A : initiate and listen

B : wait and acknoweldge

C : request and reply

D : send and receive

Q.no 47. What is Inter process communication?

A : allows processes to communicate and synchronize their actions when using the same address space

B : allows processes to communicate and synchronize their actions without using the same address space

C : allows the processes to only synchronize their actions without communication

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Q.no 48. Which of the ceramic components are easier through nano structuring?

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B : Coating

C : Fabrication

D : Wear

Q.no 49. Execution of several activities at the same time.

A : multi processing

B : parallel processing

C : serial processing

D : multitasking

Q.no 50. It is _____ speed and _____ latency.

A : High, high

B : Low, low

C : High, low

D : Low, high

Q.no 51. Process synchronization of programs is done by

A : input

B : output

C : operating system

D : memory

Q.no 52. The management of data flow between computers or devices or between nodes in a network is called

A : Flow control

B : Data Control

C : Data Management

D : Flow Management

Q.no 53. Which of the following are TRUE for direct communication?

A : A communication link can be associated with N number of process(N = max. number of processes supported by system)

B : A communication link can be associated with exactly two processes

C : Exactly N/2 links exist between each pair of processes(N = max. number of processes supported by system)

D : Exactly two link exists between each pair of processes

Q.no 54. Thread synchronization is required because _____

A : all threads of a process share the same address space

B : all threads of a process share the same global variables

C : all threads of a process can share the same files

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Q.no 55. Which of the following two operations are provided by the IPC facility?

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Q.no 56. Which of the following is not the possible ways of data exchange?

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Q.no 58. A thread shares its resources(like data section, code section, open files, signals) with _____

A : other process similar to the one that the thread belongs to

B : other threads that belong to similar processes

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D : all of the mentioned

Q.no 59. The parallelism achieved on the basis of conditions is called as

A : Instruction level

B : Thread level

C : Transaction level

D : None of Above

Q.no 60. The register context and stacks of a thread are deallocated when the thread?

A : terminates

B : blocks

C : unblocks

D : spawns

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B : Finding bipartiteness of a graph

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B : Newtonian mechanics

C : Macro-dynamic

D : Geophysics

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B : Mesh

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A : Scope

B : Capacity

C : Bandwidth

D : Limitation

Q.no 54. Octa-core processor are the processors of the computer system that contains

A : 2 processors

B : 4 processors

C : 6 processors

D : 8 processors

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B : Bucket sort

C : Radix sort

D : Quick sort

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A : first thread of the process

B : first two threads of the process

C : all threads within the process

D : no thread within the process

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C : Most of Instructions/sec

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D : Both A and B

Q.no 32. RMI stands for?

A : Remote Mail InvocationRemote Message Invocation

B : Remaining Method Invention

C : Remaining Method Invocation

D : Remote Method Invocation

Q.no 33. Which of the following is not a noncomparison sort?

A : Counting sort

B : Bucket sort

C : Radix sort

D : Shell sort

Q.no 34. What is Inter process communication?

A : allows processes to communicate and synchronize their actions when using the same address space

B : allows processes to communicate and synchronize their actions without using the same address space

C : allows the processes to only synchronize their actions without communication

D : none of the mentioned

Q.no 35. _____ are major issues with non-buffered blocking sends

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B : Selection sort

C : Bubble sort

D : Merge sort

Q.no 41. It is _____ speed and _____ latency.

A : High, high

B : Low, low

C : High, low

D : Low, high

Q.no 42. Consider the situation in which assignment operation is very costly. Which of the following sorting algorithm should be performed so that the number of assignment operations is minimized in general?

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Q.no 50. Writing parallel programs is referred to as

A : Parallel computation

B : Parallel processes

C : Parallel development

D : Parallel programming

Q.no 51. Which of the following is not the possible ways of data exchange?

A : Simplex

B : Multiplex

C : Half-duplex

D : Full-duplex

Q.no 52. A thread shares its resources(like data section, code section, open files, signals) with _____

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B : other threads that belong to similar processes

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B : Concurrency transparency

C : Performance transparency

D : Replication transparency

Q.no 57. Multi-processor systems of the computer system has advantage of

A : cost

B : reliability

C : uncertainty

D : scalability

Q.no 58. Process synchronization of programs is done by

A : input

B : output

C : operating system

D : memory

Q.no 59. The management of data flow between computers or devices or between nodes in a network is called

A : Flow control

B : Data Control

C : Data Management

D : Flow Management

Q.no 60. A thread is also called _____

A : Light Weight Process(LWP)

B : Heavy Weight Process(HWP)

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11342_High Performance Computing

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B : CPU

C : I/O

D : Memory

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B : A communication link can be associated with exactly two processes

C : Exactly N/2 links exist between each pair of processes(N = max. number of processes supported by system)

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A : a) there is another process R to handle and pass on the messages between P and Q

B : there is another machine between the two processes to help communication

C : there is a mailbox to help communication between P and Q

D : none of the mentioned

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C : Quick Sort

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A : Data Decomposition

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Q.no 14. Calling a kernel is typically referred to as _____.

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A : Mandatory Instructions/sec

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Q.no 17. The time complexity of heap sort in worst case is

A : O(log n)

B : O(n)

C : O(nlogn)

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Q.no 18. Which of the following is not a stable sorting algorithm?

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B : Selection sort

C : Bubble sort

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Q.no 19. When the Breadth First Search of a graph is unique?

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B : Dynamic Mapping

C : Hybrid Mapping

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Q.no 28. Execution of several activities at the same time.

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B : parallel processing

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D : multitasking

Q.no 29. the basic operations in the message-passing programming paradigm are ___

A : initiate and listen

B : wait and acknoweldge

C : request and reply

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Q.no 30. Nanoscience can be studied with the help of _____

A : Quantum mechanics

B : Newtonian mechanics

C : Macro-dynamic

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B : Shared memory

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Q.no 32. _____ leads to concurrency.

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B : Parallelism

C : Serial processing

D : Distribution

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B : Selection sort

C : Bubble sort

D : Merge sort

Q.no 34. Dynamic networks of networks, is a dynamic connection that grows is called

A : Multithreading

B : Cyber cycle

C : Internet of things

D : None of these

Q.no 35. A process can be _____

A : single threaded

B : multithreaded

C : both single threaded and multithreaded

D : none of the mentioned

Q.no 36. The network topology used for interconnection network.

A : Bus based

B : Mesh

C : Linear Array

D : All of above

Q.no 37. Parallel computing uses _____ execution

A : sequential

B : unique

C : simultaneous

D : none of the answers is correct

Q.no 38. It is _____ speed and _____ latency.

A : High, high

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Q.no 46. Consider the situation in which assignment operation is very costly. Which of the following sorting algorithm should be performed so that the number of assignment operations is minimized in general?

A : Insertion sort

B : Selection sort

C : Bubble sort

D : Merge sort

Q.no 47. _____ are major issues with non-buffered blocking sends

A : concurrent and mutual exclsion

B : Idling and deadlocks

C : synchronization

D : scheduling

Q.no 48. Running merge sort on an array of size n which is already sorted is

A : O(n)

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Q.no 52. Which of the following are TRUE for direct communication?

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A : Mobility transparency

B : Concurrency transparency

C : Performance transparency

D : Replication transparency

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C : there is a mailbox to help communication between P and Q

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Q.no 55. The architecture which can compute several tasks simultaneously at processor level itself is called as:

A : Multi core architecture

B : Multi processor architecture

C : Multi threaded architecture

D : All of above

Q.no 56. The amount of data that can be carried from one point to another in a given time period is called

A : Scope

B : Capacity

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D : Limitation

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B : output

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Q.no 59. The transparency that enables accessing local and remote resources using identical operations is called _____

A : Access transparency

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D : Scaling transparency

Q.no 60. Termination of the process terminates _____

A : first thread of the process

B : first two threads of the process

C : all threads within the process

D : no thread within the process

Answer for Question No 1. is a

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Answer for Question No 51. is d

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11342_High Performance Computing

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Q.no 10. Which one of the following is not shared by threads?

A : program counter

B : stack

C : both program counter and stack

D : none of the mentioned

Q.no 11. Decomposition stands for

A : Dividing Problem statement

B : Dividing no of processors

C : Dividing number of tasks

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B : Media mass

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B : Coating

C : Fabrication

D : Wear

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A : sequential

B : unique

C : simultaneous

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B : other threads that belong to similar processes

C : other threads that belong to the same process

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B : blade server

C : clustered system

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A : Instruction level

B : Thread level

C : Transaction level

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A : input

B : output

C : operating system

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B : Data Control

C : Data Management

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Q.no 59. A thread is also called _____

A : Light Weight Process(LWP)

B : Heavy Weight Process(HWP)

C : Process

D : None of the mentioned

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A : Instruction level

B : Thread level

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Answer for Question No 1. is c

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11342_High Performance Computing

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D : void

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B : communicate with one another by resorting to shared data

C : share data

D : name the recipient or sender of the message

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A : High, high

B : Low, low

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B : allows processes to communicate and synchronize their actions without using the same address space

C : allows the processes to only synchronize their actions without communication

D : none of the mentioned

Q.no 32. Network interfaces allow the transfer of messages from buffer memory to desired location without ____ intervention

A : DMA

B : CPU

C : I/O

D : Memory

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A : multi processing

B : parallel processing

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B : Shared memory

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B : Parallelism

C : Serial processing

D : Distribution

Q.no 37. High performance computing of the computer system tasks are done by

A : node clusters

B : network clusters

C : both a and b

D : Beowulf clusters

Q.no 38. The network topology used for interconnection network.

A : Bus based

B : Mesh

C : Linear Array

D : All of above

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Q.no 41. A process can be _____

A : single threaded

B : multithreaded

C : both single threaded and multithreaded

D : none of the mentioned

Q.no 42. Broader concept offers Cloud computing .to select which of the following.

A : Parallel computing

B : Centralized computing

C : Utility computing

D : Decentralized computing

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A : Remote Mail InvocationRemote Message Invocation

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B : wait and acknoweldge

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A : input

B : output

C : operating system

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Q.no 53. One that is not a type of multiprocessor of the computer system is

A : dual core

B : blade server

C : clustered system

D : single core

Q.no 54. A thread shares its resources(like data section, code section, open files, signals) with _____

A : other process similar to the one that the thread belongs to

B : other threads that belong to similar processes

C : other threads that belong to the same process

D : all of the mentioned

Q.no 55. NVIDIA thought that 'unifying theme' of every forms of parallelism is the

A : CDA thread

B : PTA thread

C : CUDA thread

D : CUD thread

Q.no 56. Termination of the process terminates _____

A : first thread of the process

B : first two threads of the process

C : all threads within the process

D : no thread within the process

Q.no 57. Given a number of elements in the range [0....n^3]. which of the following sorting algorithms can sort them in O(n) time?

A : Counting sort

B : Bucket sort

C : Radix sort

D : Quick sort

Q.no 58. Which of the following two operations are provided by the IPC facility?

A : write & delete message

B : delete & receive message

C : send & delete message

D : receive & send message

Q.no 59. In indirect communication between processes P and Q _____

A : a) there is another process R to handle and pass on the messages between P and Q

B : there is another machine between the two processes to help communication

C : there is a mailbox to help communication between P and Q

D : none of the mentioned

Q.no 60. Octa-core processor are the processors of the computer system that contains

A : 2 processors

B : 4 processors

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11342_High Performance Computing

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B : Media mass

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Q.no 51. Multi-processor systems of the computer system has advantage of

A : cost

B : reliability

C : uncertainty

D : scalability

Q.no 52. The parallelism achieved on the basis of operations is called as

A : Instruction level

B : Thread level

C : Transaction level

D : None of Above

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B : output

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B : all threads of a process share the same global variables

C : all threads of a process can share the same files

D : all of the mentioned

Q.no 56. Data access and storage are elements of Job throughput, of _____.

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B : Adaptation

C : Efficiency

D : Dependability

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B : have to be a variable size

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A : terminates

B : blocks

C : unblocks

D : spawns

Answer for Question No 1. is c

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C : kernel termination

D : kernel invocation

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A : Partitioned Address space

B : Exclusive address space

C : Logical Adress Space

D : Non shared Adress Space

Q.no 25. Type of HPC applications of

A : Management

B : Media mass

C : Business

D : Science

Q.no 26. Which of the following is NOT a characteristic of parallel computing?

A : Breaks a task into pieces

B : Uses a single processor or computer

C : Simultaneous execution

D : May use networking

Q.no 27. It is _____ speed and _____ latency.

A : High, high

B : Low, low

C : High, low

D : Low, high

Q.no 28. Broader concept offers Cloud computing .to select which of the following.

A : Parallel computing

B : Centralized computing

C : Utility computing

D : Decentralized computing

Q.no 29. _____ leads to concurrency.

A : Serialization

B : Parallelism

C : Serial processing

D : Distribution

Q.no 30. the basic operations in the message-passing programming paradigm are ___

A : initiate and listen

B : wait and acknoweldge

C : request and reply

D : send and receive

Q.no 31. Dynamic networks of networks, is a dynamic connection that grows is called

A : Multithreading

B : Cyber cycle

C : Internet of things

D : None of these

Q.no 32. Running merge sort on an array of size n which is already sorted is

A : O(n)

B : O(nlogn)

C : O(n^2)

D : O(log n)

Q.no 33. The network topology used for interconnection network.

A : Bus based

B : Mesh

C : Linear Array

D : All of above

Q.no 34. Message passing system allows processes to _____

A : communicate with one another without resorting to shared data

B : communicate with one another by resorting to shared data

C : share data

D : name the recipient or sender of the message

Q.no 35. We have an internet cloud of resources In cloud computing to form

A : Centralized computing

B : Decentralized computing

C : Parallel computing

D : All of Above

Q.no 36. If one thread opens a file with read privileges then _____

A : other threads in the another process can also read from that file

B : other threads in the same process can also read from that file

C : any other thread can not read from that file

D : all of the mentioned

Q.no 37. Consider the situation in which assignment operation is very costly. Which of the following sorting algorithm should be performed so that the number of assignment operations is minimized in general?

A : Insertion sort

B : Selection sort

C : Bubble sort

D : Merge sort

Q.no 38. Parallel computing uses _____ execution

A : sequential

B : unique

C : simultaneous

D : none of the answers is correct

Q.no 39. RMI stands for?

A : Remote Mail InvocationRemote Message Invocation

B : Remaining Method Invention

C : Remaining Method Invocation

D : Remote Method Invocation

Q.no 40. Network interfaces allow the transfer of messages from buffer memory to desired location without ____ intervention

A : DMA

B : CPU

C : I/O

D : Memory

Q.no 41. Nanoscience can be studied with the help of _____

A : Quantum mechanics

B : Newtonian mechanics

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A : thread moves to the ready queue

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A : greater than the time required to create a new process

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C : equal to the time required to create a new process

D : none of the mentioned

Q.no 44. High performance computing of the computer system tasks are done by

A : node clusters

B : network clusters

C : both a and b

D : Beowulf clusters

Q.no 45. Time complexity of bubble sort in best case is

A : θ (n)

B : θ (nlogn)

C : θ (n^2)

D : θ (n(logn)^2)

Q.no 46. Writing parallel programs is referred to as

A : Parallel computation

B : Parallel processes

C : Parallel development

D : Parallel programming

Q.no 47. Execution of several activities at the same time.

A : multi processing

B : parallel processing

C : serial processing

D : multitasking

Q.no 48. Which of the ceramic components are easier through nano structuring?

A : Lubrication

B : Coating

C : Fabrication

D : Wear

Q.no 49. If the given input array is sorted or nearly sorted, which of the following algorithm gives the best performance?

A : Insertion sort

B : Selection sort

C : Bubble sort

D : Merge sort

Q.no 50. _____ are major issues with non-buffered blocking sends

A : concurrent and mutual exclsion

B : Idling and deadlocks

C : synchronization

D : scheduling

Q.no 51. A thread is also called _____

A : Light Weight Process(LWP)

B : Heavy Weight Process(HWP)

C : Process

D : None of the mentioned

Q.no 52. NVIDIA thought that 'unifying theme' of every forms of parallelism is the

A : CDA thread

B : PTA thread

C : CUDA thread

D : CUD thread

Q.no 53. In indirect communication between processes P and Q _____

A : a) there is another process R to handle and pass on the messages between P and Q

B : there is another machine between the two processes to help communication

C : there is a mailbox to help communication between P and Q

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Q.no 54. The transparency that enables accessing local and remote resources using identical operations is called _____

A : Access transparency

B : Concurrency transparency

C : Performance transparency

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Q.no 55. Octa-core processor are the processors of the computer system that contains

A : 2 processors

B : 4 processors

C : 6 processors

D : 8 processors

Q.no 56. Given a number of elements in the range [0….n^3]. which of the following sorting algorithms can sort them in O(n) time?

A : Counting sort

B : Bucket sort

C : Radix sort

D : Quick sort

Q.no 57. Which of the following is not the possible ways of data exchange?

A : Simplex

B : Multiplex

C : Half-duplex

D : Full-duplex

Q.no 58. The register context and stacks of a thread are deallocated when the thread?

A : terminates

B : blocks

C : unblocks

D : spawns

Q.no 59. Dynamic networks is a dynamic connection that grows is called

A : Multithreading

B : Cyber cycle

C : Internet of things

D : Cyber-physical system

Q.no 60. Multi-processor systems of the computer system has advantage of

A : cost

B : reliability

C : uncertainty

D : scalability

Answer for Question No 1. is c

Answer for Question No 2. is c

Answer for Question No 3. is c

Answer for Question No 4. is b

Answer for Question No 5. is b

Answer for Question No 6. is a

Answer for Question No 7. is c

Answer for Question No 8. is d

Answer for Question No 9. is a

Answer for Question No 10. is b

Answer for Question No 11. is a

Answer for Question No 12. is c

Answer for Question No 13. is b

Answer for Question No 14. is b

Answer for Question No 15. is a

Answer for Question No 16. is a

Answer for Question No 17. is a

Answer for Question No 18. is d

Answer for Question No 19. is b

Answer for Question No 20. is b

Answer for Question No 21. is d

Answer for Question No 22. is d

Answer for Question No 23. is d

Answer for Question No 24. is b

Answer for Question No 25. is d

Answer for Question No 26. is a

Answer for Question No 27. is c

Answer for Question No 28. is c

Answer for Question No 29. is b

Answer for Question No 30. is d

Answer for Question No 31. is c

Answer for Question No 32. is b

Answer for Question No 33. is d

Answer for Question No 34. is a

Answer for Question No 35. is d

Answer for Question No 36. is b

Answer for Question No 37. is b

Answer for Question No 38. is c

Answer for Question No 39. is d

Answer for Question No 40. is b

Answer for Question No 41. is a

Answer for Question No 42. is a

Answer for Question No 43. is b

Answer for Question No 44. is d

Answer for Question No 45. is a

Answer for Question No 46. is d

Answer for Question No 47. is b

Answer for Question No 48. is c

Answer for Question No 49. is b

Answer for Question No 50. is b

Answer for Question No 51. is a

Answer for Question No 52. is c

Answer for Question No 53. is c

Answer for Question No 54. is a

Answer for Question No 55. is d

Answer for Question No 56. is c

Answer for Question No 57. is b

Answer for Question No 58. is a

Answer for Question No 59. is c

Answer for Question No 60. is b

Seat No -

Total number of questions : 60

11342_High Performance Computing

Time : 1hr

Max Marks : 50

N.B

1) All questions are Multiple Choice Questions having single correct option.

2) Attempt any 50 questions out of 60.

3) Use of calculator is allowed.

4) Each question carries 1 Mark.

5) Specially abled students are allowed 20 minutes extra for examination.

6) Do not use pencils to darken answer.

7) Use only black/blue ball point pen to darken the appropriate circle.

8) No change will be allowed once the answer is marked on OMR Sheet.

9) Rough work shall not be done on OMR sheet or on question paper.

10) Darken ONLY ONE CIRCLE for each answer.

Q.no 1. MIPS stands for?

A : Mandatory Instructions/sec

B : Millions of Instructions/sec

C : Most of Instructions/sec

D : Many Instructions / sec

Q.no 2. In ..... only one process at a time is allowed into its critical section, among all processes that have critical sections for the same resource.

A : Mutual Exclusion

B : Synchronization

C : Deadlock

D : Starvation

Q.no 3. Which of the following is not an application of Breadth First Search?

A : Finding shortest path between two nodes

B : Finding bipartiteness of a graph

C : GPS navigation system

D : Path Finding

Q.no 4. Regarding implementation of Breadth First Search using queues, what is the maximum distance between two nodes present in the queue? (considering each edge length 1)

A : Can be anything

B : 0

C : At most 1

D : Insufficient Information

Q.no 5. The decomposition technique in which the input is divided is called as_____

A : Data Decomposition

B : Recursive Decomposition

C : Speculative Decomposition

D : Exploratory Decomposition

Q.no 6. Which of the following is a stable sorting algorithm?

A : Merge sort

B : Typical in-place quick sort

C : Heap sort

D : Selection sort

Q.no 7. Which one of the following is not shared by threads?

A : program counter

B : stack

C : both program counter and stack

D : none of the mentioned

Q.no 8. Several instructions execution simultaneously in _____

A : processing

B : parallel processing

C : serial processing

D : multitasking

Q.no 9. When the Breadth First Search of a graph is unique?

A : When the graph is a Binary Tree

B : When the graph is a Linked List

C : When the graph is a n-ary Tree

D : When the graph is a Ternary Tree

Q.no 10. Message-passing programs are often written using

A : symetric Paradigm

B : asymetric Paradigm

C : asynchronous paradigm

D : synchronous paradigm

Q.no 11. How many Attibutes required to characterize messsage passing paragdigm

A : 2

B : 4

C : 6

D : 8

Q.no 12. Following is not mapping technique

A : Static Mapping

B : Dynamic Mapping

C : Hybrid Mapping

D : All of Above

Q.no 13. The time complexity of a quick sort algorithm which makes use of median, found by an O(n) algorithm, as pivot element is

A : O(n^2)

B : O(nlogn)

C : O(nlog(log(n))

D : O(n)

Q.no 14. Following is not decomposition technique

A : Data Decomposition

B : Recursive Decomposition

C : Serial Decomposition

D : Exploratory Decomposition

Q.no 15. Most message-passing programs are written using

A : the single program multiple data (SPMD) model.

B : the multiple program and single data(MPSD) model

C : the single program single data (SPSD) model

D : the Multiple program multiple data (SPMD) model

Q.no 16. The logical view of a machine supporting the message-passing paradigm consists of p processes, each with its own _____

A : Partitioned Address space

B : Exclusive address space

C : Logical Adress Space

D : Non shared Adress Space

Q.no 17. The time complexity of heap sort in worst case is

A : O(log n)

B : O(n)

C : O(nlogn)

D : O(n^2)

Q.no 18. Decomposition stands for

A : Dividing Problem statement

B : Dividing no of processors

C : Dividing number of tasks

D : Dividing number of operation

Q.no 19. Type of HPC applications of

A : Management

B : Media mass

C : Business

D : Science

Q.no 20. The kernel code is dentified by the _____qualifier with void return type

A : _host_

B : __global__

C : _device_

D : void

Q.no 21. Which of the following is not a stable sorting algorithm?

A : Insertion sort

B : Selection sort

C : Bubble sort

D : Merge sort

Q.no 22. Which of the following is not an application of Depth First Search?

A : For generating topological sort of a graph

B : For generating Strongly Connected Components of a directed graph

C : Detecting cycles in the graph

D : Peer to Peer Networks

Q.no 23. Calling a kernel is typically referred to as _____.

A : kernel thread

B : kernel initialization

C : kernel termination

D : kernel invocation

Q.no 24. Which of the following is not an in-place sorting algorithm?

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B : Heap sort

C : Quick Sort

D : Merge sort

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A : Pre-order Traversal

B : Post-order Traversal

C : Level-order Traversal

D : In-order Traversal

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A : Bus based

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A : multi processing

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C : allows the processes to only synchronize their actions without communication

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B : Newtonian mechanics

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D : Geophysics

Q.no 51. Given a number of elements in the range [0....n^3]. which of the following sorting algorithms can sort them in O(n) time?

A : Counting sort

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D : Quick sort

Q.no 52. Thread synchronization is required because _____

A : all threads of a process share the same address space

B : all threads of a process share the same global variables

C : all threads of a process can share the same files

D : all of the mentioned

Q.no 53. In indirect communication between processes P and Q _____

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B : message-passing link

C : synchronization link

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B : 4 processors

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Answer for Question No 24. is d

Answer for Question No 25. is a

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Answer for Question No 27. is d

Answer for Question No 28. is c

Answer for Question No 29. is d

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