ZEAL EDUCATION SOCIETY'S
ZEAL COLLEGE OF ENGINEERING AND RESEARCH
NARHE │ PUNE -41 │ INDIA
DEPARTMENT OF COMPUTER ENGINEERING

Name of the Teacher: Mr. B A Chaugule	
Class: BE	**Subject: High Performance Computing**
AY: 2020-21	**SEM: I**

UNIT-1

1)	Execution of several activities at the same time.
	a) processing b) parallel processing c) serial processing d) multitasking
Ans:	**b**
Explanation:	
2)	Parallel processing has single execution flow.
	a) True b) False
Ans:	**b**
Explanation:	The statement is false. Sequential programming specifically has single execution flow.
3)	A term for simultaneous access to a resource, physical or logical.
	a) Multiprogramming b) Multitasking c) Threads d) Concurrency
Ans:	**d**
Explanation:	Concurrency is the term used for the same. When several things are accessed simultaneously, the job is said to be concurrent.
4)	_____ leads to concurrency.
	a) Serialization b) Parallelism c) Serial processing d) Distribution
Ans:	**b**
Explanation:	Parallelism leads naturally to Concurrency. For example, Several processes trying to print a file on a single printer.
5)	A parallelism based on increasing processor word size.
	a) Increasing b) Count based c) Bit based d) Bit level
Ans:	**d**
Explanation:	Bit level parallelism is based on increasing processor word size. It focuses on hardware capabilities for structuring.
6)	The measure of the "effort" needed to maintain efficiency while adding processors.
	a) Maintainability b) Efficiency

	c) Scalability d) Effectiveness
Ans:	**C**
Explanation:	The measure of the "effort" needed to maintain efficiency while adding processors is called as scalability.
7)	Several instructions execution simultaneously in _____
	a) processing b) parallel processing c) serial processing d) multitasking
Ans:	**b**
Explanation:	In parallel processing, the several instructions are executed simultaneously.
8)	Conventional architectures coarsely comprise of a_
	a) A processor b) Memory system c) Data path. d) All of Above
Ans:	**d**
Explanation:	
9)	A pipeline is like_
	a) Overlaps various stages of instruction execution to achieve performance. b) House pipeline c) Both a and b d) A gas line
Ans:	**a**
Explanation:	
10)	VLIW processors rely on_
	a) Compile time analysis b) Initial time analysis c) Final time analysis d) Mid time analysis
Ans:	**a**
Explanation:	
11)	Memory system performance is largely captured by_
	a) Latency b) Bandwidth c) Both a and b d) none of above
Ans:	**c**
Explanation:	
12)	The fraction of data references satisfied by the cache is called_
	a) Cache hit ratio b) Cache fit ratio

	c) Cache best ratio d) none of above
Ans:	**a**
Explanation:	
13)	A single control unit that dispatches the same Instruction to various processors is__
	a) SIMD b) SPMD c) MIMD d) None of above
Ans:	**a**
Explanation:	
14)	The primary forms of data exchange between parallel tasks are_
	a) Accessing a shared data space b) Exchanging messages. c) Both A and B d) None of Above
Ans:	**c**
Explanation:	
16)	Switches map a fixed number of inputs to outputs.
	a) True b) False
Ans:	**a**
Explanation:	
UNIT-2	
1)	The First step in developing a parallel algorithm is_
	a) To Decompose the problem into tasks that can be executed concurrently b) Execute directly c) Execute indirectly d) None of Above
Ans:	**a**
Explanation:	
2)	The number of tasks into which a problem is decomposed determines its_
	a) Granularity b) Priority c) Modernity d) None of above
Ans:	**A**
Explanation:	
3)	The length of the longest path in a task dependency graph is called_
	a) the critical path length b) the critical data length c) the critical bit length

	d) None of above
Ans:	**a**
Explanation:	
4)	The graph of tasks (nodes) and their interactions/data exchange (edges)_
	a) Is referred to as a task interaction graph b) Is referred to as a task Communication graph c) Is referred to as a task interface graph d) None of Above
Ans:	**a**
Explanation:	
5)	Mappings are determined by_
	a) task dependency b) task interaction graphs c) Both A and B d) None of Above
Ans:	**c**
Explanation:	
6)	Decomposition Techniques are_
	a) recursive decomposition b) data decomposition c) exploratory decomposition d) speculative decomposition e) All of Above
Ans:	**E**
Explanation:	
7)	The Owner Computes Rule generally states that the process assigned a particular data item is responsible for_
	a) All computation associated with it b) Only one computation c) Only two computation d) Only occasionally computation
Ans:	**A**
Explanation:	
8)	A simple application of exploratory decomposition is_
	a) The solution to a 15 puzzle b) The solution to 20 puzzle c) The solution to any puzzle d) None of Above
Ans:	**A**
Explanation:	
9)	Speculative Decomposition consist of _

	a) conservative approaches b) optimistic approaches c) Both A and B d) Only B
Ans:	**C**
Explanation:	
10)	task characteristics include:
	a) Task generation. b) Task sizes. c) Size of data associated with tasks. d) All of Above
Ans:	**d**
Explanation:	
UNIT-3	
1)	Group communication operations are built using point-to-point messaging primitives
	a) True b) False
Ans:	**A**
Explanation:	
2)	Communicating a message of size m over an uncongested network takes time ts + tmw
	a) True b) False
Ans:	**A**
Explanation:	
3)	The dual of one-to-all broadcast is_
	a) All-to-one reduction b) All-to-one receiver c) All-to-one Sum d) None of Above
Ans:	**A**
Explanation:	
4)	A hypercube has_
	a) 2d nodes b) 2d nodes c) 2n Nodes d) N Nodes
Ans:	**a**
Explanation:	
5)	A binary tree in which processors are (logically) at the leaves and internal nodes are routing nodes.

	a) True
	b) False
Ans:	**A**
Explanation:	
6)	In All-to-All Broadcast each processor is the source as well as destination.
	a) True
	b) False
Ans:	**A**
Explanation:	
7)	The Prefix Sum Operation can be implemented using the_
	a) All-to-all broadcast kernel.
	b) All-to-one broadcast kernel.
	c) One-to-all broadcast Kernel
	d) Scatter Kernel
Ans:	**A**
Explanation:	
8)	In the scatter operation_
	a) Single node send a unique message of size m to every other node
	b) Single node send a same message of size m to every other node
	c) Single node send a unique message of size m to next node
	d) None of Above
Ans:	**A**
Explanation:	
9)	The gather operation is exactly the inverse of the_
	a) Scatter operation
	b) Broadcast operation
	c) Prefix Sum
	d) Reduction operation
Ans:	**A**
Explanation:	
10)	In All-to-All Personalized Communication Each node has a distinct message of size m for every other node
	a) True
	b) False
Ans:	**a**
Explanation:	

Name and Sign of Subject Teacher