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Date: 23/07/2020

Class : BE Computer Div: A + B Subject : High Performance Computing
Academic Year : 2020-21 Sem : I Exam Date: 23/07/2020

Q. No.	*Question Description*	*Options*	*Correct Answer*	*Marks*	*CO*	*PO*	*PSO*	*BTL*
1	Select different aspects of parallelism	A. data intensive applications utilize high aggregate throughput B. server applications utilize high aggregate network bandwidth C. scientific applications typically utilize high processing and memory system performance D. all of the above	**D**	**2**	**1**	**1**	**3**	**4**
2	Select correct answer: DRAM access times have only improved at the rate of roughly ____% per year over this interval.	A. 10 B. 20 C. 40 D. 50	**A**	**2**	**1**	**1**	**3**	**4**
3	Justify, why to use parallel computing?	A. Real world is massively parallel B. Save time and/or time C. Solve larger / more complex problems D. Provide concurrency E. All of the above	**E**	**2**	**1**	**3**	**3**	**5**
4	Analyze, if the second instruction has data dependencies with the first, but the third instruction does not, the first	A. In-order B. Out-of-order C. Both of the above D. None of the above	**B**	**2**	**1**	**3**	**3**	**4**

	and third instructions can be co-scheduled. Which type if this issue is?							
5	Select the parameters which captures Memory system performance	A. Latency B. Bandwidth C. Both of the above D. None of the above	**C**	**2**	**1**	**3**	**3**	**4**
6	Consider the example of a fire-hose. If the water comes out of the hose five seconds after the hydrant is turned on. Once the water starts flowing, if the hydrant delivers water at the rate of 15 gallons/second. Analyze the bandwidth and latency.	A. Bandwidth: 5 gallons/second and Latency: 15 seconds B. Bandwidth: 5*15 gallons/second and Latency: 15 seconds C. Bandwidth: 15 gallons/second and Latency: 5 seconds D. Bandwidth: 3 gallons/second and Latency: 5 seconds	**C**	**2**	**1**	**4**	**3**	**5**
7	Select alternate approaches for Hiding Memory Latency	A. Prefeching B. Multithreading C. spatial locality D. all of the above	**D**	**2**	**1**	**3**	**3**	**4**
8	Select which clause in OpenMP is similar to the private, except values of variables are initialized to corresponding values before the	A. Private B. Firstprivate C. Shared D. All of the above	**B**	**2**	**1**	**5**	**3**	**4**

	parallel directive.							
9	The time which includes all overheads that are determined by the length of the message like bandwidth of links, error checking and correction, etc. is called as	A. Startup time (ts) B. Per-hop time (th) C. Per-word transfer time (tw) D. All of the above	**C**	**2**	**1**	**1**	**3**	**1**
10	Select in which routing technique, Message is divided into packets?	A. Store-and-forward routing B. Packet routing C. cut-through-routing D. in both 2 and 3	**D**	**2**	**1**	**3**	**3**	**4**
11	Which of the following is an efficient method of cache updating?	A. Snoopy writes B. Write through C. Write within D. Buffered write	**A**	**2**	**1**	**1**	**3**	**1**
12	Select which protocol is used for maintaining coherence of multiple processors?	A. Data coherence protocols B. Commit coherence protocols C. Recurrence D. Cache coherence protocols	**D**	**2**	**1**	**3**	**3**	**4**
13	From inter-processor communication, the misses arises are often called	A. Coherence misses B. Commit misses C. Parallel processing D. Hit rate	**A**	**2**	**1**	**1**	**3**	**1**
14	As per Flynn's Classification, where Parallel processing may occur?	A. in the instruction stream B. in the data stream C. both of the above D. none of the above	**C**	**2**	**1**	**1**	**3**	**1**

15	Which of the following projects of Blue Gene is not in development?	A. Blue Gene / L B. Blue Gene / M C. Blue Gene / P D. Blue Gene / Q	**B**	**2**	**1**	**1**	**3**	**1**

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