Academic Task Number: 01 Course Code: CSE539

Date of allotment: 31.08.2023 Course Title: Advanced Computer Architecture

Date of submission: 12.09.2023 Maximum Marks: 30M

Academic Task Type: Objective Section: K20MT

Q. No.	Question Statement	Course Outcome	Bloom's level	Marks per Question
1	The expression for the speedup function S(n) is given by a. S(n) = T(1) * T(n) b. S(n) = T(n) / T(1) c. S(n) = T(1)/ T(n) d. None of the mentioned	CO2	L2: Understand	1
2	A COMA model comprises of a. Multiprocessor + Cache Memory b. Multiprocessor + Main Memory c. Microprocessor + Cache Memory d. None of the mentioned	CO1	L1: Remember	1
3	Third generation Computer uses a. Multiprogramming and time sharing b. Multiprogramming c. Multi-threading d. All of the mentioned	CO1	L1: Remember	1
4	Second-generation computers belong to which duration a. 1945-54 b. 1955-64 c. 1965-74 d. None of the mentioned	CO1	L1: Remember	1
5	According to Bernstein, two processes, P1 and P2 can execute in parallel if and only if: a. P1 P2 b. P1/P2 c. P1*P2 = 1 d. None of the mentioned	CO2	L2: Understand	1
6	For two statements, S1 and S2, if an execution path exists from S1 to S2 then they are said to be: a. Anti dependent	CO2	L2: Understand	1

c. Output dependence d. None of the mentioned The program segment chosen for parallel processing is known as 7 a. Grain b. Cluster c. Workstation d. None of the mentioned The compiler that automatically detects the parallelism is known as a. optimizing compiler b. Runtime compiler c. Interpreter d. None of the mentioned A loop-level parallelism has a grain size of a. 20 9 b. 200 c. 500 d. None of the mentioned Demand-driven computers are also known as a. Control flow computers d. None of the mentioned Pentium - IV works on a. Control flow mechanism c. Demand-driven mechanism d. All of the mentioned Static Data Flow Computers (SDFC) was given by a. Bernstein b. Dennis c. Albrecht d. None of the mentioned 10 MFLOPs corresponds to CO2 L2: Understand 1 L1: Remember 1 CO1 L1: Remember 1 CO2 L2: Understand 1 CO1 L1: Remember 1 CO2 L2: Understand 1 CO3 L3: Understand 1 CO3 L4: Understand 1 CO3 L4: Understand 1 CO3 L4: Understand 1 CO3 L4: Understand 1 CO4 L4: Understand 1 CO5 L5: Understand 1 CO5 L5		b. Flow dependence			
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c. Albrecht d. None of the mentioned 13 100 MFLOPs corresponds to CO2 Understand 1 CO2 L2: 1					1
d. None of the mentioned 13 100 MFLOPs corresponds to CO2 L2:					1
13 CO2					
13 CO2	13	100 MFLOPs corresponds to	C	1.2.	
		a. 100 million floating point operations/second	CO2		1

	1 1/100 1111 0 1			
	b. 1/100 million floating point operations/second			
	c. 1/10 million floating point operations/second			
	d. None of the mentioned			
	The other name for CPU is			
	a. Parallel Computer		L1:	
14	b. ALU	CO1	Remember	1
	c. Processing Element (PE)			
	d. None of the mentioned			
	Identify the computers that belong to the 5 th			
	generation			
15	a. Cray - XMP	CO1	L1:	1
13	b. Intel Paragon	COI	Remember	1
	c. VPP 500			
	d. Both Intel Paragon and VPP 500			
	Instruction execution involves five phases that are:			
	a. Operand Fetch, Fetch, Decode, Execution, Results		L2: Understand	1
16	b. Fetch, Execute, Decode, Operand Fetch, Results	CO2		
10	c. Fetch, Decode, operand Fetch, Execution,	CO2		
	Results			
	d. None of the mentioned			
	Parallelism is equal to			
	a. Hardware Parallelism + Software Parallelism	CO2	L2: Understand	
17	b. Hardware Parallelism only			1
	c. Software Parallelism only			
	d. None of the mentioned			
	Which among the following computers belongs to			
	Third generation	CO1	L1: Remember	1
1.0	a. IBM 360/370			
18	b. CDC 6600			
	c. TI – ASC			
	d. All of the mentioned			
19	Identify the technology that is implemented in second			
	generation	CO1	L1: Remember	
	a. Vacuum Tubes			1
	b. Integrated Circuits			1
	c. Discrete Transistors & Core memories			
	d. VLSI and Semi - Conductor memory			
20	Array Processors are put under which of these	CO2	L2:	1

	categories		Understand	
	a. SSID		o naorstana	
	b. SIMD			
	c. MISD			
	d. MIMD			
	Performance (P) and execution time (T) of CPU are			
	related by			
	a. P = T		L1:	
21	b. P + T	CO1	Remember	1
	c. P is directly proportional to T			
	d. P is inversely Proportional to T			
	Data driven machines takes a			
	approach as it select the instruction for execution			
	based on the availability of the operands			
22	a. bottom up	CO2	L2: Understand	1
	b. top-down		Understand	
	c. internal			
	d. none of the mentioned			
	The capacity to reduce the time needed to solve the			
	problem as the computing resources increases is			
	called		L2:	
23	a. Scalability	CO2	Understand	1
	b. Efficiency		Olidelistalia	
	c. Performance			
	d. None of the mentioned			
	A parallel computing system is said to be if			
	its efficiency can be fixed by simultaneously			
	increasing the number of processor and the problem			
24	size a. Scalable	CO2	L2:	1
	a. Scalableb. Efficient		Understand	
	B 0			
	c. Performanced. None of the mentioned			
25	80% of the Offer program execution time occurs inside a loop that can be executed in parallel and rest			
	20% in serial. what is the maximum speedup that is	<u> </u>	L2:	
	expected from a parallel version of the program	CO2	Understand	1
	executing on 8 CPUs		·	
	a. 3.33			

	1 00			
	b. 3.25			
	c. 4.55			
	d. none of the mentioned			
26	is a generic method in which visual aids are provided like pictures to assist the programmer in evaluating the performance of parallel programs a. Visualization b. Communication display c. Search based tools d. None of the mentioned	CO2	L2: Understand	1
27	The Ratio of the time taken to execute a program in single processor to the time taken to execute in end processors is called a. Efficiency b. Scalability c. performance metric d. Speedup	CO2	L2: Understand	1
28	Demand driven machines take aApproach attempting to execute the instructions that yields the final result a. bottom up b. Top down c. Step down d. None of the mentioned	CO2	L2: Understand	1
29	Control flow missions uses memory for instructions and data a. Distributed b. Shared c. Both distributed and shared d. None of the mentioned	CO1	L1: Remember	1
30	The execution of an instruction is driven by data (operand) availability instead of being guided by a program counter is called computers a. Control Flow b. Data Flow c. Instruction Flow d. None of the mentioned	CO2	L2: Understand	1