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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

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

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

	categories a. SSID **b. SIMD** c. MISD d. MIMD		Understand	
21	Performance (P) and execution time (T) of CPU are related by a. P = T b. P + T c. P is directly proportional to T **d. P is inversely Proportional to T**	CO1	L1: Remember	1
22	Data driven machines takes a _____ approach as it select the instruction for execution based on the availability of the operands **a. bottom up** b. top-down c. internal d. none of the mentioned	CO2	L2: Understand	1
23	The capacity to reduce the time needed to solve the problem as the computing resources increases is called _____ a. Scalability b. Efficiency **c. Performance** d. None of the mentioned	CO2	L2: Understand	1
24	A parallel computing system is said to be _____ if its efficiency can be fixed by simultaneously increasing the number of processor and the problem size **a. Scalable** b. Efficient c. Performance d. None of the mentioned	CO2	L2: Understand	1
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 expected from a parallel version of the program executing on 8 CPUs **a. 3.33**	CO2	L2: Understand	1

	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 a _____ Approach 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