00371

Sample

The Open University of Sri Lanka
B.Sc. (IT) Degree Programme – 2023/2024
Department of Computer Science
COU 3300 – Computer Organization and Communication
No Book Test 2
Duration: One hour only (1 hour)

Date: 04.05.2024 Time: 09.00 a.m. – 10.00 a.m.

ANSWER ALL QUESTIONS **Index Number:.....**

Write the answers on the question paper itself.

Write the most suitable answer a, b, c or d inside the cage provided for each question.		
1.	Which methods can be used for minimization in digital logic design? a) Only algebraic manipulation b) Only Karnaugh Map (K-Map) approach c) Both algebraic manipulation and K-Map approach d) None of the above	
2.	RISC stands for - a) Reduce Instruction Set Computer b) Risk Instruction Sequential Compilation c) Risk Instruction Source Compiler d) None of the above	
3.	What is the primary objective of parallel processing in computer systems? a) To execute tasks one at a time, improving system stability. b) To utilize multiple processors for multitasking purposes. c) To enhance system performance by executing two or more instructions simultaneously. d) To prioritize tasks based on their complexity for efficient execution.	
4.	What is the main characteristic of sequential processing in computer systems? a) Executing multiple instructions simultaneously. b) Completing tasks one at a time, in a step-by-step manner. c) Utilizing multiple processors for parallel execution. d) Running tasks concurrently, allowing for efficient multitasking.	

5.	Which of the following instruction set architectures (ISAs) is known for its focus on simplicity and efficiency, employing a smaller set of instructions? a) RISC b) CISC c) ARM d) Extended x86 (x86-64)	
6.	Which statement accurately describes pipelining in computer architecture? a) Pipelining involves executing multiple instructions simultaneously, breaking down a sequential process into smaller activities. b) Pipelining executes instructions in a single clock cycle, resulting in faster processing. c) Pipelining prioritizes the execution of complex instructions over simpler ones to optimize performance. d) Pipelining reduces the number of stages in the instruction execution process to improve efficiency.	
7.	Which of the following statements accurately describes the register file in computer architecture? a) The register file is a software component that manages file storage on a computer system. b) The register file is a data structure used to organize files and directories in memory. c) The register file, a specific structure within the CPU, contains a collection of registers and includes two read ports and one write port. d) The register file is responsible for managing network connections and data transfer between different devices.	
8.	Which of the following is NOT a type of Datapath designed based on the types of instructions they execute? a) Horizontal Datapath b) Load/Store Datapath c) Branch/Jump Datapath d) Single-cycle and Multi-cycle Datapath	

9.	Which statement is false regarding multithreaded process? a) Multi-threaded programs divide a traditional single process into multiple threads. b) Each thread in a multi-threaded program has its own program counter, stack, and set of registers. c) A multithreaded server supports several threads, each created when a client delivers a request, enabling concurrent connections. d) Multi-threaded programs do not share common code, data, and structures like open files.	
10.	In computer architecture, what term describes the process of adding servers or computers to handle increased server load or accommodate a high volume of user requests? a) Clustering b) Pipelining c) Scaling d) Virtualization	
11.	Which of the following is a drawback of vertical scaling in computing? a) It reduces software expenses and maintenance efforts. b) It increases the chances of hardware failure. c) It simplifies implementation by introducing new resources. d) It reduces the risk of single-point failure.	
12.	Which scaling method involves increasing system throughput by adding resources like memory and storage to a single machine, enhancing its capacity without introducing new resources? a) Sequential Scaling b) Load balancing c) Vertical Scaling d) Horizontal Scaling	
13.	A horizontal scaling method also known as, a) Scale-up method b) Scale-in method c) Scale-down method d) Scale-out method	

14.	What term describes the transfer of data from one digital device to another? a) Data manipulation b) Data storage c) Data transmission d) Data sequencing	
15.	Which factors can impact the efficiency of the transmission process? a) Encoding, reception rate, and channel quantity b) Decoding, transmission rate, and network speed c) Encoding, transmission rate, and channel quality d) Encryption, bandwidth, and server capacity	
16.	Which of the following statements accurately describes analog signals? a) Analog signals exhibit a discrete range of values between anticipated extremes. b) Analog signals are represented by digital waveforms. c) Analog signals refer to signals that change abruptly and discontinuously. d) Analog signals exhibit a continuous range of values between anticipated extremes and are represented by sine waves or other continuous waveforms.	
17.	What makes analog signals ideal for audio and visual recordings? a) Their discrete nature allows for precise digital encoding. b) They have a fixed amplitude and vary discontinuously over time. c) They capture actual waveforms and represent physical behaviors continuously. d) They are resistant to interference and noise in transmission.	
18.	Which of the following is NOT a disadvantage of digital transmission? a) Information loss due to sampling in digital signals. b) Hardware requirements for Analog-to-Digital (A/D) and Digital-to-Analog (D/A) conversion. c) Digital signals enable error-free rotation of moving instruments. d) Processor speed constraints leading to round-off issues and quantization.	

19.	What is the term used to describe the process of applying a clock to any sequential circuit? a) Clock synchronization b) Clock initiation c) Clock generation d) Triggering	
20.	Which of the following statements accurately describes the concept of states in a system? a) Transient State occurs when the system is inactive or not performing significant tasks. b) Idle State represents a temporary state that occurs during transitions between other states. c) Active State indicates that the process is actively performing tasks or operations. d) Transient State signifies that the process is actively performing tasks or operations.	
21.	Which term describes the type of clock signal where every signal is sent across one wire? a) Single-phase clock b) Two-phase clock c) Four-phase clock d) Clock multiplier	
22.	Which of the following options correctly pairs each instruction with its function in an Instruction Set? a) ADD - Compare numerical values. b) COMPARE - Jump to the specified RAM address. c) JUMP IF - A conditional statement jumps to a certain RAM address. d) STORE - Load data to the CPU from RAM.	
23.	Which of the following options correctly lists popular modern operating systems? a) iOS, Android, Windows XP, Linux b) Windows 95, MS-DOS, Mac OS , Solaris c) Microsoft Windows, Mac OS, Linux, Solaris d) Windows Vista, iOS, Linux, Chrome OS	

24.	What does "APIs" stand for? a) Application Programming Instructions b) Application Programming Interfaces c) Advanced Program Instructions d) Advanced Programming Interfaces	
25.	Which statement accurately describes Transmission Control Protocol/Internet Protocol (TCP/IP)? a) TCP/IP is a single-layered protocol used for Internet communication. b) TCP/IP follows a peer-to-peer communication model c) TCP/IP consists of four layers: Data link layer, Network Layer, Transport layer, and Application layer. d) TCP/IP is primarily used for communication between servers only.	

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