A complete web enabled Education Administration Software

1 INTRODUCTION: Functional units of digital system and their interconnections 2 Buses, bus architecture 3 Types of buses and bus arbitration 4 Register, Bus and Memory Transfer 5 Pracessor Organization 6 General Registers Organization 7 Stack Organization 8 Arithmetic and logic unit: took ahead carries adders 9 Addition and Subtraction 10 Multiplication: Signed operand multiplication, 11 Booth's algorithm. 12 array multiplier. 13 Division and logic aperations. 14 Restoring Division Algorithm 15 Non-Restoring Division Algorithm 16 Control Unit: Instruction types, formats 17 Instruction cycles and sub cycles (letch and execute etc) 18 Micro-operations, execution of a complete instruction. 19 Program Control 20 Reduced Instruction Set Computer 21 Parallel Processing 22 Pipelining 23 Hardwired & Microprogrammed control unit. 24 Input / Output: Peripheral devices, 25 I/O interface, I/O ports 26 Interrupts: Interrupts and exceptions. 27 bypes of interrupts and exceptions.	Sr. No.	Topic Name
Types of buses and bus arbitration Register, Bus and Memory Transfer Processor Organization Ceneral Registers Organization Stack Organization Arithmetic and logic unit: Look ahead carries adders Addition and Subtraction Multiplication: Signed operand multiplication, Booth's algorithm. Carray multiplier. Division and logic operations. Restoring Division Algorithm Non-Restoring Division Algorithm Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and executions.	1	INTRODUCTION: Functional units of digital system and their interconnections
Register, Bus and Memory Transfer Processor Organization General Registers Organization Arithmetic and logic unit: Look ahead carries adders Arithmetic and logic unit: Look ahead carries adders Addition and Subtraction Multiplication: Signed operand multiplication, Booth's algorithm. Array multiplier. Division and logic operations. Restoring Division Algorithm Non-Restoring Division Algorithm Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Prarallel Processing Prarallel Processing Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: Interrupt hardware, types of interrupts and exceptions.	2	Buses, bus architecture
Frocessor Organization General Registers Organization Stack Organization Arithmetic and logic unit: Look ahead carries adders Addition and Subtraction Multiplication: Signed operand multiplication, Multiplication: Signed operand multiplication, Booth's algorithm. array multiplier. Division and logic operations. Restoring Division Algorithm South's algorithm Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced instruction Set Computer Parallel Processing Parallel Processing Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and executions.	3	Types of buses and bus arbitration
6 General Registers Organization 7 Stack Organization 8 Arithmetic and logic unit. Look ahead carries adders 9 Addition and Subtraction 10 Multiplication: Signed operand multiplication, 11 Booth's algorithm. 12 array multiplier. 13 Division and logic operations. 14 Restoring Division Algorithm 15 Non-Restoring Division Algorithm 16 Control Unit: Instruction types, formats 17 Instruction cycles and sub cycles (fetch and execute etc) 18 Micro-operations, execution of a complete instruction. 19 Program Control 20 Reduced Instruction Set Computer 21 Parallel Processing 22 Fipelining 23 Hardwired & Microprogrammed control unit. 24 Input / Output: Peripheral devices, 25 I/O interface, I/O ports 26 Interrupts: interrupt hardware, 27 types of interrupts and exceptions.	4	Register, Bus and Memory Transfer
Stack Organization Arithmetic and logic unit: Look ahead carries adders Addition and Subtraction Multiplication: Signed operand multiplication, Booth's algorithm. Booth's algorithm. Program Control Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Reduced Instruction set Computer Program Control Program Control Program Control Aradille Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts and exceptions.	5	Processor Organization
Arithmetic and logic unit: Look ahead carries adders Addition and Subtraction Multiplication: Signed operand multiplication, Booth's algorithm. Carray multiplier. Division and logic operations. Restoring Division Algorithm Non-Restoring Division Algorithm Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Program Control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, Interrupts: interrupt and exceptions.	6	General Registers Organization
Addition and Subtraction Multiplication: Signed operand multiplication, Booth's algorithm. Division and logic operations. Restoring Division Algorithm Son-Restoring Division Algorithm Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: Interrupts and exceptions.	7	Stack Organization
Multiplication: Signed operand multiplication, Booth's algorithm. 12 array multiplier. 13 Division and logic operations. 14 Restoring Division Algorithm 15 Non-Restoring Division Algorithm 16 Control Unit: Instruction types, formats 17 Instruction cycles and sub cycles (fetch and execute etc) 18 Micro-operations, execution of a complete instruction. 19 Program Control 20 Reduced Instruction Set Computer 21 Parallel Processing 22 Pipelining 43 Hardwired & Microprogrammed control unit. 19 Input / Output: Peripheral devices, 1/O interface, I/O ports 26 Interrupts: interrupt hardware, 27 types of interrupts and exceptions.	8	Arithmetic and logic unit: Look ahead carries adders
Booth's algorithm. In the storing Division and logic operations. In the storing Division Algorithm Booth's algorithm Restoring Division Algorithm Booth's algorithm Restoring Division Algorithm Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Reduced Instruction of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	9	Addition and Subtraction
12 array multiplier. 13 Division and logic operations. 14 Restoring Division Algorithm 15 Non-Restoring Division Algorithm 16 Control Unit: Instruction types, formats 17 Instruction cycles and sub cycles (fetch and execute etc) 18 Micro-operations, execution of a complete instruction. 19 Program Control 20 Reduced Instruction Set Computer 21 Parallel Processing 22 Pipelining 23 Hardwired & Microprogrammed control unit. 24 Input / Output: Peripheral devices, 25 I/O interface, I/O ports 26 Interrupts: interrupt hardware, 27 types of interrupts and exceptions.	10	Multiplication: Signed operand multiplication,
Division and logic operations. Restoring Division Algorithm Non-Restoring Division Algorithm Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	11	Booth's algorithm.
Restoring Division Algorithm Non-Restoring Division Algorithm Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts interrupt hardware, types of interrupts and exceptions.	12	array multiplier.
Non-Restoring Division Algorithm Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	13	Division and logic operations.
Control Unit: Instruction types, formats Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	14	Restoring Division Algorithm
Instruction cycles and sub cycles (fetch and execute etc) Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	15	Non-Restoring Division Algorithm
Micro-operations, execution of a complete instruction. Program Control Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	16	Control Unit: Instruction types, formats
Program Control Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	17	Instruction cycles and sub cycles (fetch and execute etc)
Reduced Instruction Set Computer Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	18	Micro-operations, execution of a complete instruction.
Parallel Processing Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	19	Program Control
Pipelining Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	20	Reduced Instruction Set Computer
Hardwired & Microprogrammed control unit. Input / Output: Peripheral devices, I/O interface, I/O ports Interrupts: interrupt hardware, types of interrupts and exceptions.	21	Parallel Processing
24 Input / Output: Peripheral devices, 25 I/O interface, I/O ports 26 Interrupts: interrupt hardware, 27 types of interrupts and exceptions.	22	Pipelining
25 I/O interface, I/O ports 26 Interrupts: interrupt hardware, 27 types of interrupts and exceptions.	23	Hardwired & Microprogrammed control unit.
26 Interrupts: interrupt hardware, 27 types of interrupts and exceptions.	24	Input / Output: Peripheral devices,
27 types of interrupts and exceptions.	25	I/O interface, I/O ports
	26	Interrupts: interrupt hardware,
28 Modes of Data Transfer: Programmed I/O,	27	types of interrupts and exceptions.
	28	Modes of Data Transfer: Programmed I/O,

Sr. No.	Topic Name
29	Interrupt initiated
30	I/O and Direct Memory Access.,
31	I/O channels and processors. Serial Communication: Synchronous & asynchronous communication,
32	Standard communication interfaces
33	Memory: Basic concept
34	memory hierarchy
35	2D & 2 1/2D memory organization
36	ROM memories. Cache memories: concept and design issues & performance,
37	Address mapping-Direct Addressing
38	Address mapping- Associative
39	Address mapping – Set Associative
40	Auxiliary memories: magnetic disk, magnetic tape and optical disks
41	Virtual memory: concept implementation
42	Page Replacement Policies
43	Conclusion and problem discussion