2012N1050

Candidate's Seat No:____

BCA Sem.-3 Examination
CC 201
Computer Organisation (New)
December-2025

Time : 2.30 Hours] **[Max.Marks : 70**

Q1 A	What is Digital Computer explain with Block diagram.	7
B	List the different types of Flip-Flops explain JK Flip-Flop in detail.	7
	OR	
A	List Different types of Gates. Explain only Universal and XNOR gate in detail	7
B	Explain 4 to 2 Encoder and 2 to 4 Decoder in Detail	7
Q 2 A	What is Complement? Explain r's and r-1's complement .Convert following. $5690_{(10)}$ in to r's complement $5555_{(8)}$ in to r-1's complement. $1100001_{(2)}$ in to r's complement	7
B	Explain Binary Adder in detail.	7
	OR	
A	Explain Fixed-point and Floating Point Representation.	7
B	Explain Three-state bus buffers with graphic symbol and logic diagram	7
Q3 A	Explain Common Bus System in detail with Diagram.	7
B	Explain Memory Reference and Register Reference Instruction in detail.	7
	OR	
A	List the Different types of Addressing Modes, Explain Immediate, Direct, Indirect and Register Indirect mode in detail.	7
B	Explain Instruction Cycle in Detail	7
Q4 A	List the different Modes of Transfer. Explain DMA in detail	7
B	Draw Memory Hierarchy Diagram. Explain Auxiliary and Cache Memory in detail	7
	OR	
A	Explain I/O Bus and Interface Module in detail.	7
B	Explain Asynchronous and Synchronous Data Transfer in Detail	7
Q5	**Answer the following Questions (any 7)**	14
1	In T Flip Flop T means what?	
2	The _____ converts a serial data signal at the input to a parallel data. (A) Encoder (B) Decoder (C) Multiplexer (D) De-Multiplexer	
3	_____Is used to convert Decimal Data to a code such as binary or BCD. (A) Encoder (B) Decoder (C) Multiplexer (D) De-Multiplexer	
4	Binary Incremental use Full Adder(True/False)	
5	_____holds the address of next instruction to be read from memory after the current instruction is executed. (A) Accumlater (B) Shift Register (C) MBR (D) Program Counter	
6	$(1010100)_2$-$(1000100)_2$ Binary Subtraction using 2's complement.	
7	Instruction Register store OPCODE (true/False).	
8	In _____ addressing Mode Value is directly store in Register. (A) Direct (B) Immediate (C) Indirect (D) None of these	
9	In _____ I/O Mode Devices generate Interrupt signals to computer. (A) DMA (B) Programmed (C) Interrupt (D) All of theses	
10	_____Memory is retrieve Data by matching some part of content of data. (A) Main (B) Cache (C) Associative (D) Auxiliary	
11	Which of the following is not used as secondary storage? _____ (A) Semiconductor memory (B) Magnetic tapes (C) Magnetic Disks (D) Optical Disk	
12	234_8 convert into 7's complement.	

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