

[Time:2.30 Hrs]		[Marks:75]
Please check whether you have got the right question paper.		
N.B:	1. All question are compulsory. 2. Figures to the right indicate full marks.	

Q.1	Attempt any four of the following.	20
A	Explain the basic structure and operation of a computer.	
B	Why Nand gate is called Universal gate.	
C	Design Full adder circuit.	
D	Explain tristate buffer.	
E	What is the role of shift register? Explain with a 4-bit register.	
F	What is multiplexer? Explain it's use.	
Q.2	Attempt any four of the following.	20
A	Explain Big-Endian and Little- Endian Assignment.	
B	Define the following terms: 1) Memory 2) Memory word 3) Word Length 4) Address 5) Address Space	
C	Differentiate Between RISC and CISC.	
D	What is an assembler? What is an object program?	
E	Compare Machine Language and Assembly Language.	
F	What is Function Call? Explain it's use in ISA	
Q.3	Attempt any four of the following.	20
A	What is Interrupt? Give an example.	
B	Explain Direct Memory Access.	
C	Explain arithmetic, logic & load instructions with an example	
D	List and explain different type of peripheral devices.	
E	Illustrate the Concept of Data Path.	
F	Explain the main components of a processor?	
Q.4	Attempt any three of the following.	15
A	Explain NOR, Exclusive OR, Exclusive NOR gate with truth table.	
B	Convert decimal number 106 to binary & Octal Form.	
C	List and explain with a neat diagram the main hardware component of the processor.	
D	Explain S-R Flip Flop.	
E	Compare Multiplexer and Demultiplexer.	
F	Explain the Half Adder? Draw it's logic diagram.	

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