BCA ( part –III)

 Paper – III

 Computer system architecture

 Unit – I

1. Explain binary, octal, decimal and hexadecimal number with example.
2. Add the following binary numbers :
	* + 101010 and 111010
		+ 100101 and 11001
3. Explain ASCII, EBCDIC and grey code with example.

 Unit – 2

 Describe logic gates XOR , NOR, NAND , XNOR and AND with truth table and logic diagram.

1. Explain T flip-flop with truth table and logic diagram.
2. Simplify the following using K-map :

F (A, B, C, D) = Πm (0, 1, 4 ,5 , 14 ,15)

 Unit-3

1. Explain ALU and control unit in brief.
2. Draw a block diagram of macro computer system and explain.
3. Explain motherboard and SMPS in brief .

 Unit-4

* + 1. Explain I/O processor with suitable diagram
		2. Differentiate between synchronous and asynchronous data transfer.
		3. Differentiate between isolated and memory mapped I/O.

 UNIT-5

* + 1. Draw a suitable diagram of a memory hierarchy and explain.
		2. Discuss about associative memory and virtual memory.
		3. Explain the following :
1. Page table
2. Cache memory