



BHARATI VIDYAPEETH'S

INSTITUTE OF COMPUTER APPLICATIONS & MANAGEMENT (BVICAM)

(Affiliated to Guru Gobind Singh Indraprastha University, Approved by AICTE, New Delhi)

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Course Code: MCA-107

Course Name: Computer Organization

Class Test 1

Time: 1 Hour

Max Marks: 20

1. A computer uses a memory unit with 256K words of 32 bits each. 5 marks
A binary instruction code stored in one word of memory. The instruction has four parts: an indirect bit, an operation code, a register code part to specify one of 64 registers and an address part.
i)How many bits are there in the operation code the register code part and the address part?
(ii)Draw the instruction word format and indicate the no. of bits in each part.
(iii)How many bits are there in the data and address inputs of the memory.
2. Draw the logic diagram of a 2-bit encoder, a circuit with four input 5 marks
lines, exactly one of which is high at any instant and two output lines whose 2 bit binary value tells which input is high.
3. Design 1:64 demultiplexer using 1:16 demultiplexer. 5 marks
4. A computer uses a memory unit with 256K words of 32 bits each . 5 marks
A binary instruction code stored in one word of memory. The instruction has four parts: an indirect bit, an operation code, a register code part to specify one of 64 registers and an address part.