

CA-09

1. What is meant by an instruction?

This is an order given to a computer processor by a computer program.

2. Instruction Set Architecture (ISA), is the part of the computer architecture related to?

Processor Architecture

3. Instruction format contains of two main parts. What are they?

Opocode and Operands

4. Where are instructions stored?

In the Main memory

5. How are instructions stored?

In instruction memory address is assigned a unique address to identify its location memory.

6. An instructions differs from another instruction by 3 main factors? What are they?

Opocode, Operand and Operand Values

7. A computer that is used for simple numerical problems, uses 6 bits for an opcode, and 12 bits for a memory address. What is the size of its instruction?

Size of instruction = size of opcode + size of memory address
= 6 bits + 12 bits
= 18 bits

8. A computer that is used for simple numerical problems, uses 6 bits for an opcode and 12 bits for a memory address. How many different instructions can it have?

Number of different instructions = $2^{(\text{number of bits for the opcode})}$
= 2^6
= 64

9. Memory address of the instruction format contains of two parts. What are they?

Instruction memory index

Instruction offset

