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Course Code : CSE-313

Course Title : Computer Architecture

"Mid Term Exam"

1

Ans to the Q No 1(a)

Computer architecture is a description of the structure of a computer system made from component parts.

Basic Diagram:

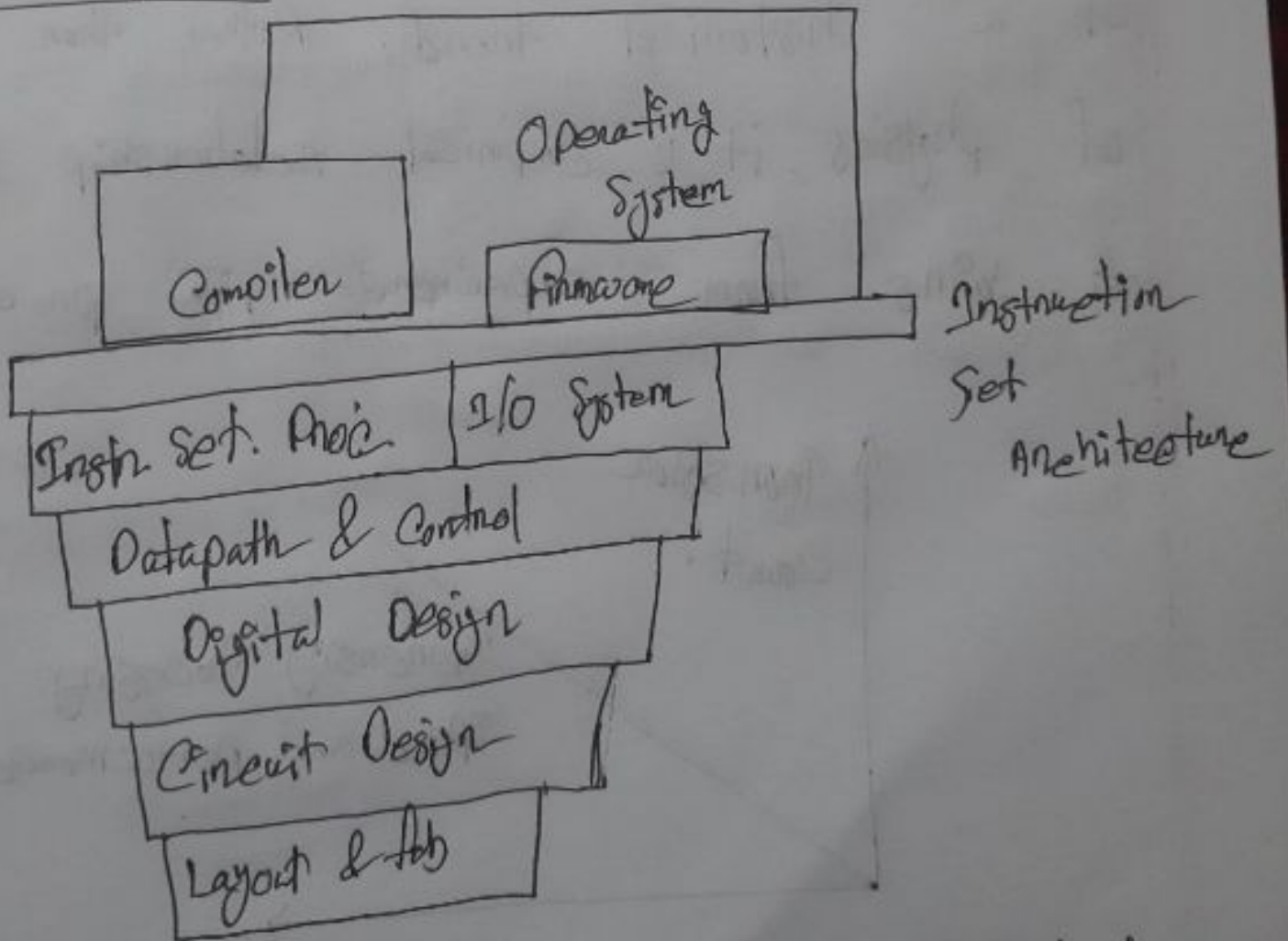


Fig.:- Basic Diagram of Computer Architecture.

2

Ans. to the Q. No. 1 (b)

Moore's law is the observation that the number of transistors in an integrated circuit (IC) doubles about every two years.

Moore's law is an observation and projection of a historical trend. Rather than a law of physics, it is empirical relationship linked to gains from experience in production.

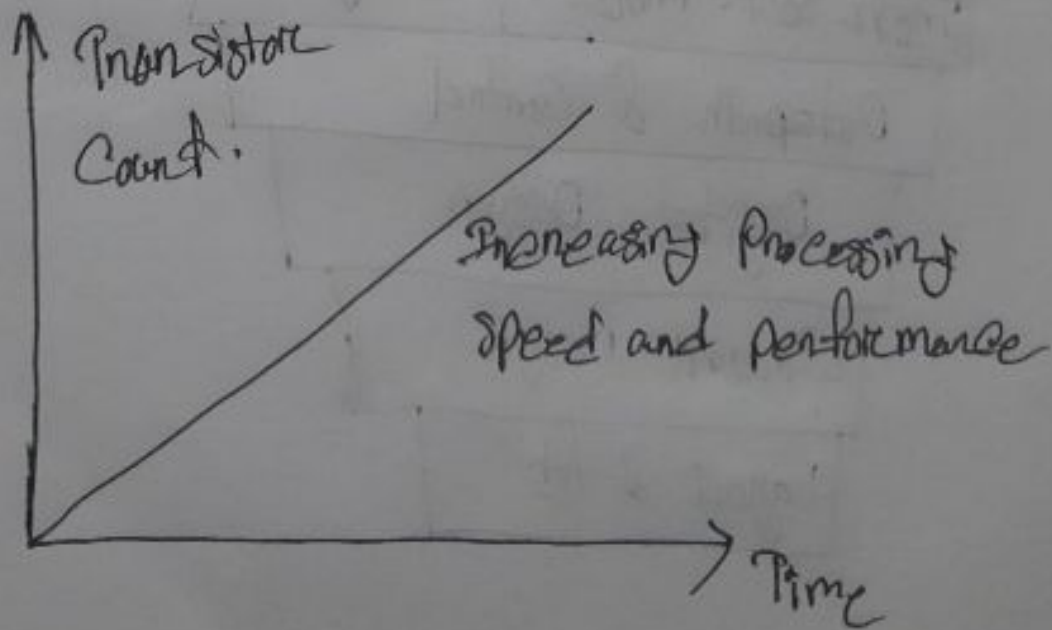


Fig: Graph.

3

Ans to the Q No 2(a)

The Instruction Set: a critical Interface —

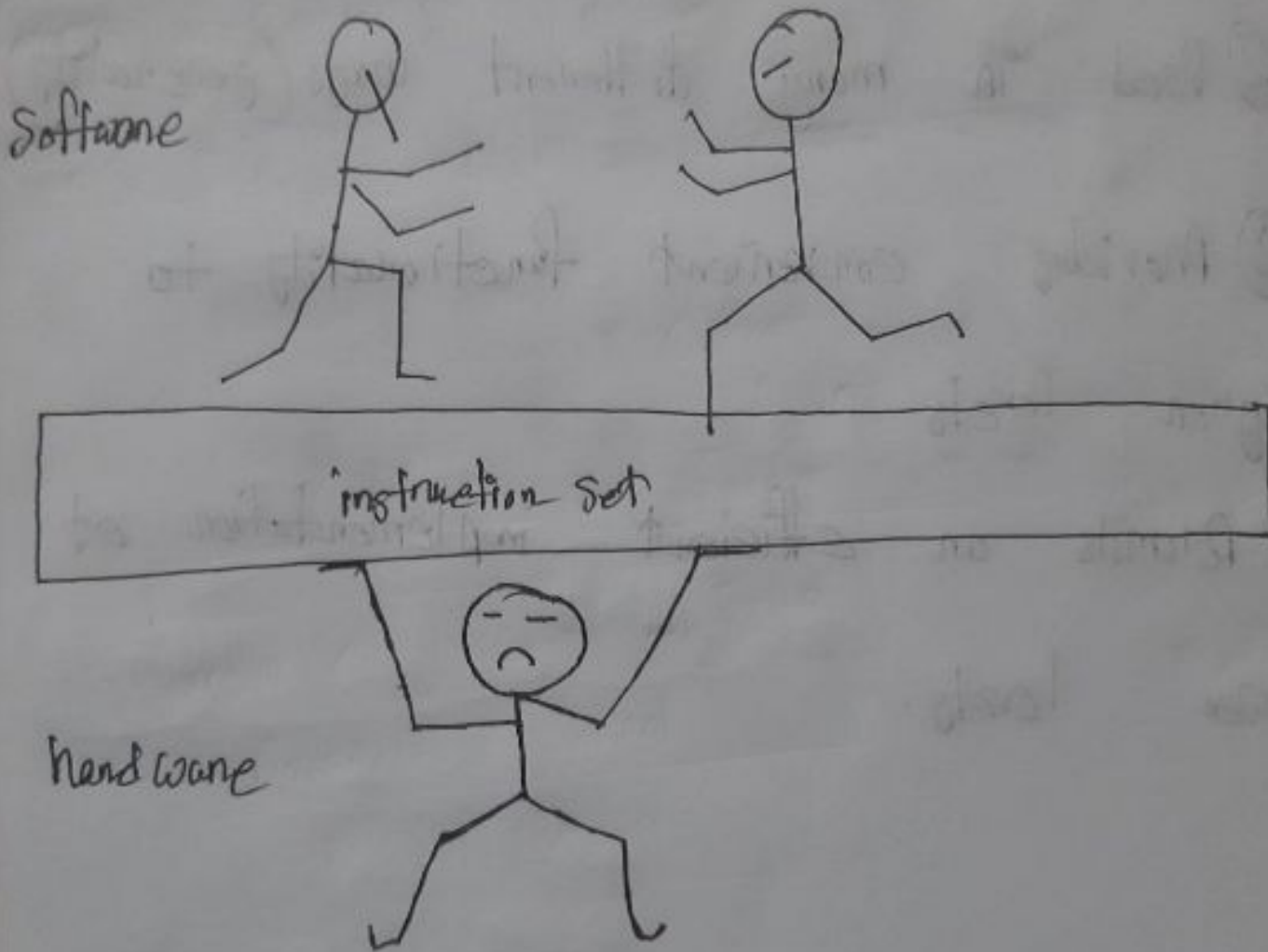


Figure: 1.1

4

Ans-to the Q No 2(b)

Properties of a good abstraction — (Abstraction)

① Lasts through many generations (Durability)

② Used in many different ways (Generality)

③ Provides convenient functionality to higher levels.

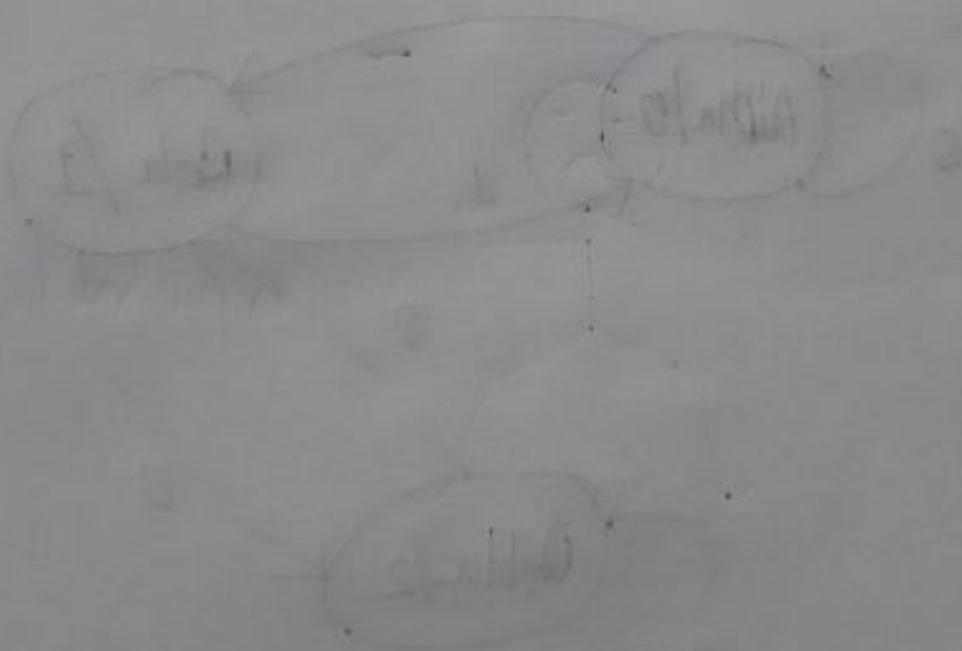
④ Permits an efficient implementation at lower levels.



5

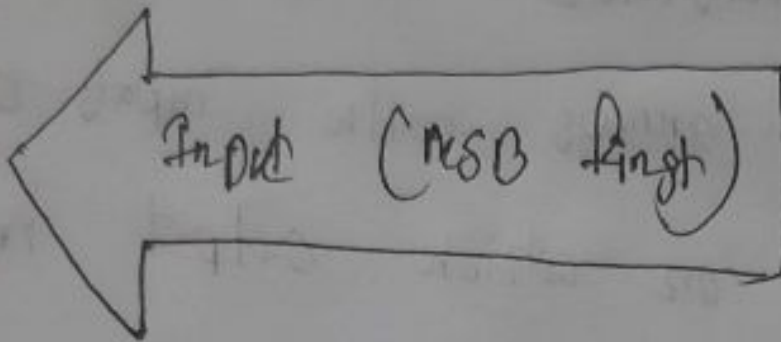
Ans to the Q-No 3(a)

System state which is explicit in representation and a transition between states on which is represented as arrows with inputs on one end and also on which output may be either part of state or on one end are called finite state machine.



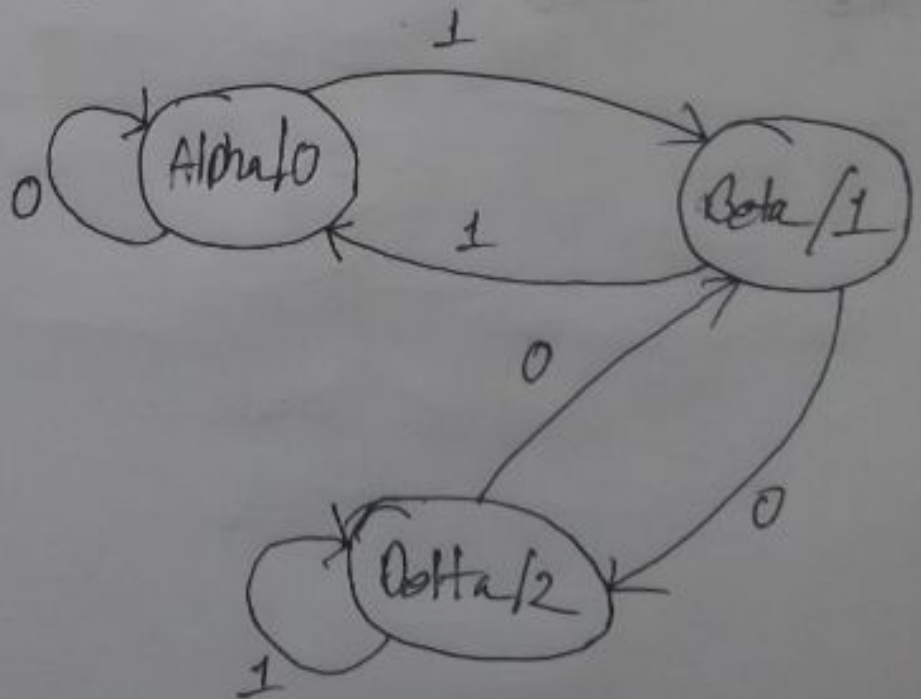
Ans to the Q No 3(b)

"Mod 3 Machine"



1 1 0 1 0 1 0

1 0 0 1 2 2 1



7

11 01 01 0

= 106

Mod 3



$$\begin{array}{r} 3 \overline{) 106} \\ \underline{105} \\ 1 \end{array} \quad \begin{array}{l} (35 \end{array}$$

लगातार 1 .

Ans .