Slide → Clock Generator 8284

* Clock signal chip হলো 8284

Write the work of Clock Generator

Ans

a. Reading from memory or I/o
b. Writing to memory or I/o

Programmable Peripheral Interface Clock signal use করে না,

Draw Block diagram of 8284 Clock

Ans.

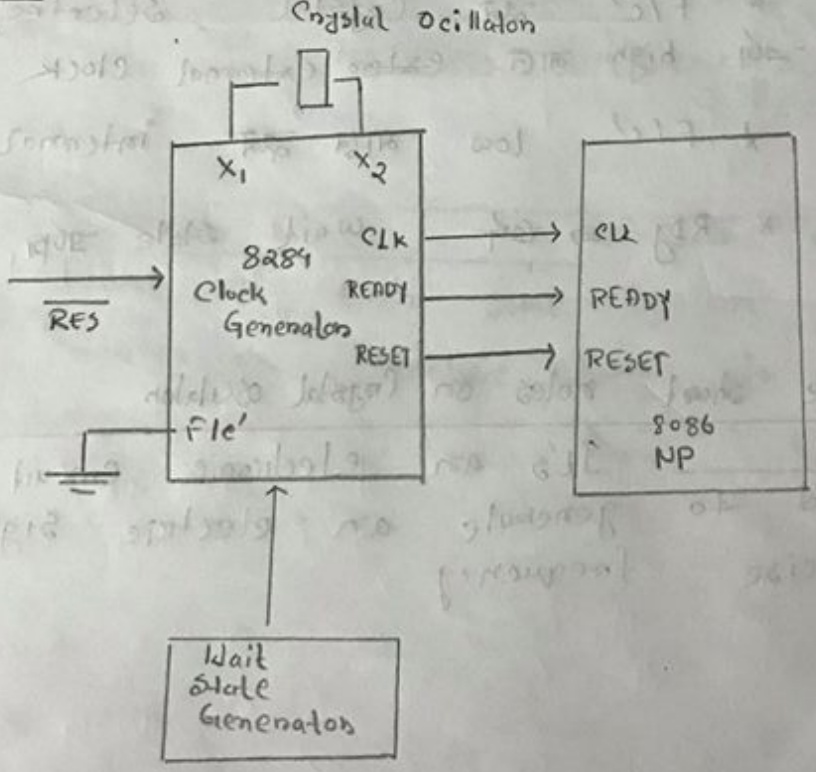

Fig: 8284 Block Diagram Interfaced with 8086

* RES → low তে active হয়
* 5v দিলে vibration হয়, Regular Vibration Clock signal হিসেবে ব্যবহার করা হয়,
* Crystal হলো Piezo - Electric Material
* X_1 ও X_2 হলো Crystal Select পিন, যেটা high মানে external Clock
* X_1 ও X_2 low মানে internal clock

* RES → low তে active হয়,
* 5v দিলে vibration হয়, Regular Vibration Clock signal হিসেবে ব্যবহার করা হয়
* Crystal হলো ~~Ring~~ Piezo - Electric Material
* F/C' হলো Crystal selected Pin. এটা high মানে ~~exter~~ external clock
* F/C' low মানে হলে internal clock.
* RDY => এটা wait state হয়,

Write short notes on Crystal oscilator

Ans: It's an electronic circuit that is used to generate an electric signal of Precise frequency

Write the advantages of Quartz Crystal

Ans:

a. Very stable signal used in an oscillator
b. Low level of noise for oscillator
c. Low cost

Write the disadvantages of Quartz Crystal

Ans

a. Size : Due to mechanical vibration it has resonant behavior. So size can not be reduced easily

b. Soldering: Soldering needs maximum temperatures

c. Fixed Frequency : Crystal has own natural ~~res~~ resonant frequencies.

Piezoelectric Effect: Pressure applied to quartz or even some certain Crystals creates an electric change in that certain material.

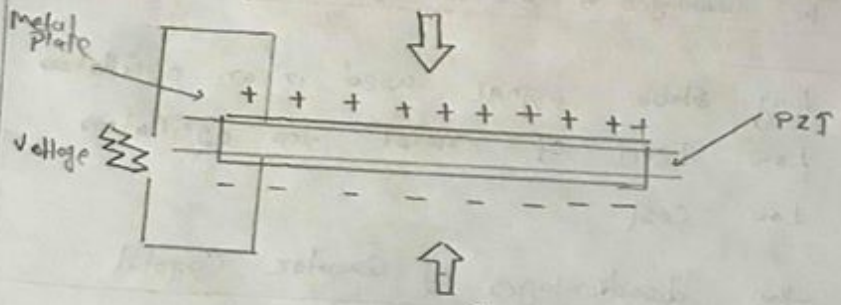

Fig: Compression of Piezoelectric Material

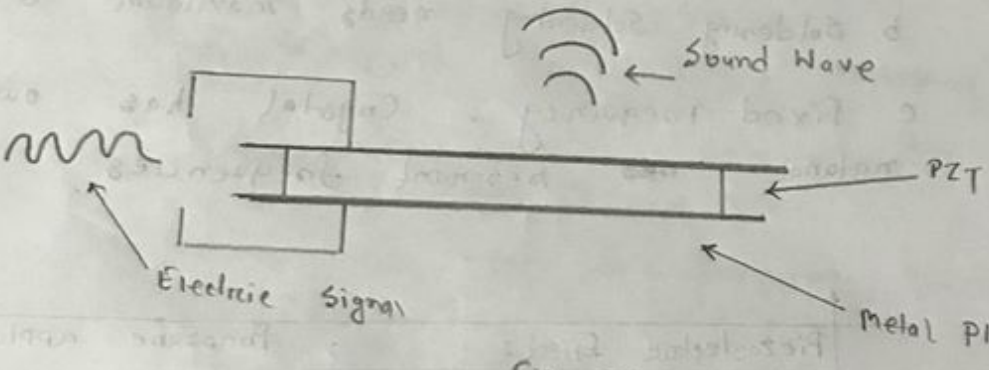

Fig: Piezoelectric Effect Causes Voice Signal

=> Single Processor এক্ষেত্রে সমস্যা নাই,
=> দুটা Processor এক্ষেত্রে memory access ⟵ Problem
হয়.
=> দুটা Processor কে Common domain share
করতে হবে, Common clock ব্যবহার করতে হবে,
=> Master Processor এর নিজস্ব clock follow
করবে,
MicroProcessor => Internal clock Follow করে
এমন => External clock
২ টা Processor এক্ষেত্রে => Internal clock.

Write the importance of SAP-1

Ans

It's Primary Purpose is to develop a basic understanding of how a micro-Processor works, interacts with memory & other Parts of the system like input & output.

* SAP1 কে design করা হয় Academic Purpose এর জন্য।

* SAP কে 8 bit architecture.
* 16 x 8 memory. এখানে 16 টা memory location যাদের প্রত্যেকের size হল 8 bit.
* এবং মিলিয়ে মোট 5 টা instruction..