



معهد مصر العالي للتجارة و الحاسبات بالمنصورة

Computer Organization and Assembly File

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Section 7
Computer Science

Q1: Write notes about the types of ROM?

MROM - Mask Read Only Memory

MROM is the short form of Mask Read Only Memory. It is inexpensive and is the very first ROM which is hard wired device that contains a pre-programmed set of data or instructions.

PROM - Programmable Read Only Memory

PROM is read-only memory chip that data can be written only once by a user. The difference between it and the read only memory is that PROM is manufactured as a blank memory, while the ROM is programmed during the manufacturing process.

EPROM - Erasable Programmable Read Only Memory

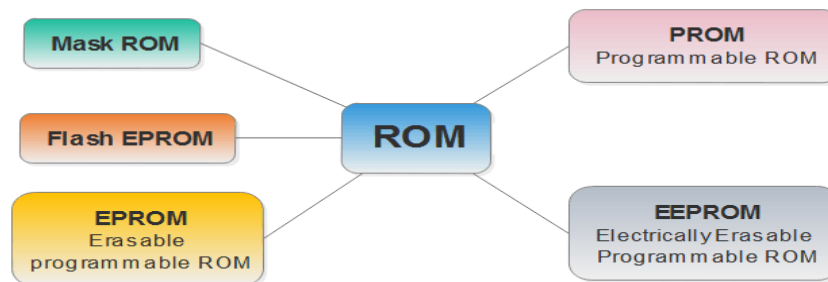
EPROM is a special kind of read only memory chip that has the opportunity to erase the programmed data, which the feature can be seen from its name. The programmable read-only memory can be programmed to write data with high voltage, and the data remains until it is exposed to ultraviolet light for lasting up to 10 minutes or longer.

EEPROM - Electrically Erasable and Programmable Read Only Memory

EEPROM is also a kind of read only memory that the principle of operation is similar to EPROM which we have mentioned, but the ways to program and erase are done by exposing it to an electrical charge, so no transparent window is needed.

Flash Memory

Flash memory (flash) is a modern type of EEPROM. Flash memory can be erased and rewritten faster than ordinary EEPROM, and newer designs has the feature that is very high endurance (exceeding 1,000,000 cycles).



Q2: The main difference between RAM and ROM is

- Read / Write
- Read Only
- No Read / Write
- None of the above.

The Main Different is RAM can Write and Read
and Rom Can Read Only

Q3: The size of Memory is depending on

- Address lines
- Data lines
- OR gates
- Address lines and Data lines

Q4: True or False

1. 1 bit = 8 bytes (**False**)
2. 16-Byte word = 4 bytes (**False**)
3. 32-bit word = 4 bytes (**True**)
4. RAM is able to provide READ / WRITE (**True**).
5. ROM is programmed and the data is stored based on Hexadecimal system (**False**).
6. $G(\text{giga})=2^{20}$, it means the number of address lines is 20 (**False**).
7. $64K = 2^{16}$, the address lines are 64(**True**).