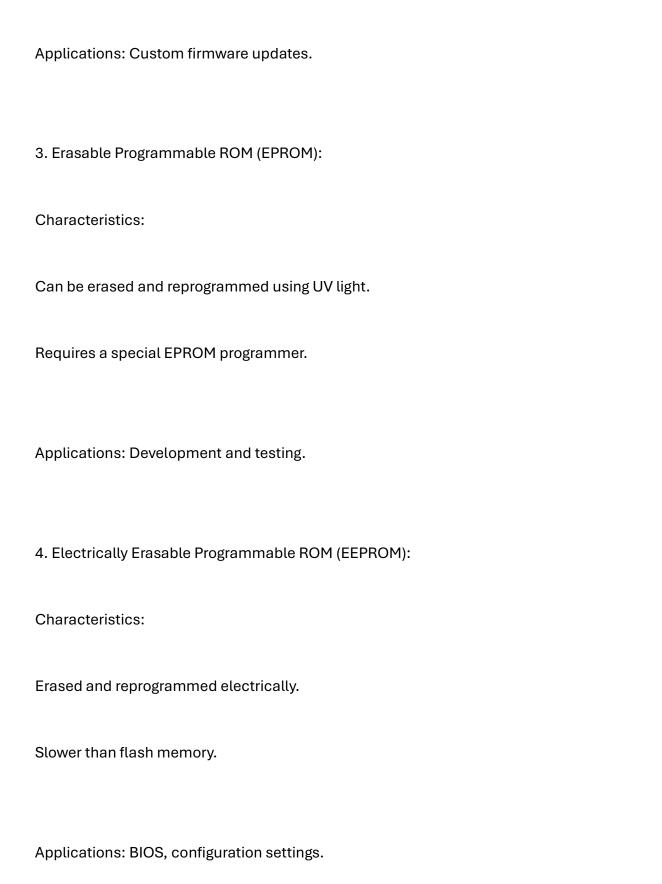
Types of RAM RAM is volatile memory, meaning it loses its data when power is turned off. The two primary types are: 1. Static RAM (SRAM): Characteristics: Faster and more expensive. Uses flip-flops to store data, requiring six transistors per bit. No need for refreshing as long as power is supplied. Applications: Cache memory in CPUs, small high-speed memory. 2. Dynamic RAM (DRAM):

UNIT 5 SEQUENTIAL LOGIC CIRCUITS 2

Characteristics:
Slower but more cost-effective.
Stores data in capacitors that require periodic refreshing due to charge leakage.
Denser and used for larger memory capacities.
Applications: Main memory in computers.
Variants of DRAM:
Synchronous DRAM (SDRAM): Operates in sync with the system clock.
Double Data Rate SDRAM (DDR, DDR2, DDR3, etc.): Transfers data on both edges of the clock signal.
Graphics DRAM (GDDR): Optimized for GPUs.
Embedded DRAM (eDRAM): Integrated into chips for performance.

Types of ROM
ROM is non-volatile memory, meaning it retains data even when the power is off. Types include:
1. Mask ROM:
Characteristics:
Data is permanently written during manufacturing.
Cannot be modified after production.
Applications: Fixed firmware in devices.
2. Programmable ROM (PROM):
Characteristics:
Programmable once after manufacturing.
Uses fusible links that are burned during programming.



5. Flash Memory:	
Characteristics:	
A type of EEPROM with faster access and erasure.	
Supports block-level erasure.	
Applications: USB drives, SSDs, embedded systems.	