

08/25/22: Block Cipher:-

Formal definition:

$$E: \{0,1\}^K \times \{0,1\}^L \rightarrow \{0,1\}^L$$

where,

$K \rightarrow$  denotes the length of the key in the block.  
 $L \rightarrow$  denotes the length of the bits in the block.

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Types of Attacks in Cryptography:-

- 1.) Known Cipher Text Attack. (KCA)  $\rightarrow$  least dangerous.
- 2.) Known Plain Text Attack. (KPA)
- 3.) Chosen Plain Text Attack. (CPA)
- 4.) Adaptive CPA.
- 5.) Chosen Cipher Text Attack. (CCA)
- 6.) Adaptive CCA.  $\rightarrow$  most dangerous.
- 7.) Brute Force Attack (or) Exhaustive search Attack.