The S-DES encryption algorithm uses an 8-bit plaintext block and a 10-bit key as an input and generates an 8-bit ciphertext block as an output, and the S-DES decryption algorithm uses an 8-bit ciphertext block and a corresponding 10-digit key to generate the ciphertext as an input and generate the first 8-bit plaintext block. The main difference between encryption and decryption of SDES is that in encryption you have to input the plain text block and traverse the SDES while in decryption you have to repeat same process but with the input as that enciphered block.