

Đặt: Trên - A, Dưới - B, Trái - C, Phải - D		
STT	Nút được mở rộng	Tập biên O (hàng đợi FIFO)
0		S
1	S	A, C, D
2	A	C, D, AA, AC, AD
3	C	D, AA, AC, AD, CA
4	D	AA, AC, AD, CA, DA
5	AA	AC, AD, CA, DA, AAC, AAD
6	AC	AD, CA, DA, AAC, AAD, ACA, ACB
7	AD	CA, DA, AAC, AAD, ACA, ACB, ADA, ADB
8	CA	DA, AAC, AAD, ACA, ACB, ADA, ADB, CAA, CAD

9	DA	AAC, AAD, ACA, ACB, ADA, ADB, CAA, CAD, DAA, DAC
10	AAC	AAD, ACA, ACB, ADA, ADB, CAA, CAD, DAA, DAC, AACB
11	AAD	ACA, ACB, ADA, ADB, CAA, CAD, DAA, DAC, AACB, AADB
12	ACA	ACB, ADA, ADB, CAA, CAD, DAA, DAC, AACB, AADB, ACAD
13	ACB	ADA, ADB, CAA, CAD, DAA, DAC, AACB, AADB, ACAD, ACBD
14	ADA	ADB, CAA, CAD, DAA, DAC, AACB, AADB, ACAD, ACBD, ADAC
15	ADB	CAA, CAD, DAA, DAC, AACB, AADB, ACAD, ACBD, ADAC, ADBC
16	CAA	CAD, DAA, DAC, AACB, AADB, ACAD, ACBD, ADAC, ADBC, CAAD

17	CAD	DAA, DAC, AACB, AADB, ACAD, ACBD, ADAC, ADBC, CAAD, CADA, CADB, CADD
18	DAA	DAC, AACB, AADB, ACAD, ACBD, ADAC, ADBC, CAAD, CADA, CADB, CADD, DAAC
19	DAC	AACB, AADB, ACAD, ACBD, ADAC, ADBC, CAAD, CADA, CADB, CADD, DAAC, DACA, DACB, DACC
20	AACB	AADB, ACAD, ACBD, ADAC, ADBC, CAAD, CADA, CADB, CADD, DAAC, DACA, DACB, DACC, AACBB, AACBD
21	AADB	ACAD, ACBD, ADAC, ADBC, CAAD, CADA, CADB, CADD, DAAC, DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC
22	ACAD	ACBD, ADAC, ADBC, CAAD, CADA, CADB, CADD, DAAC, DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD
23	ACBD	ADAC, ADBC, CAAD, CADA, CADB, CADD, DAAC, DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD
24	ADAC	ADBC, CAAD, CADA, CADB, CADD, DAAC, DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC
25	ADBC	CAAD, CADA, CADB, CADD, DAAC, DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC

26	CAAD	CADA, CADB, CADD, DAAC, DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC, CAADB, CAADD
27	CADA	CADB, CADD, DAAC, DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC, CAADB, CAADD, CADAC, CADAD
28	CADB	CADD, DAAC, DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC, CAADB, CAADD, CADAC, CADAD, CADBC, CADBD
29	CADD	DAAC, DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC, CAADB, CAADD, CADAC, CADAD, CADBC, CADBD, CADDA, CADDB
30	DAAC	DACA, DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC, CAADB, CAADD, CADAC, CADAD, CADBC, CADBD, CADDA, CADDB, DAACB, DAACC
31	DACA	DACB, DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC, CAADB, CAADD, CADAC, CADAD, CADBC, CADBD, CADDA, CADDB, DAACB, DAACC, DACAC, DACAD

32	DACB	DACC, AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC, CAADB, CAADD, CADAC, CADAD, CADBC, CADBD, CADDA, CADDB, DAACB, DAACC, DACAC, DACAD, DACBC, DACBD
33	DACC	AACBB, AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC, CAADB, CAADD, CADAC, CADAD, CADBC, CADBD, CADDA, CADDB, DAACB, DAACC, DACAC, DACAD, DACBC, DACBD, DACCA, DACCB
34	AACBB	AACBD, AADBB, AADBC, ACADB, ACADD, ACBDA, ACBDD, ADACB, ADACC, ADBCA, ADBCC, CAADB, CAADD, CADAC, CADAD, CADBC, CADBD, CADDA, CADDB, DAACB, DAACC, DACAC, DACAD, DACBC, DACBD, DACCA, DACCB, AACBBD
35	AACBD	Đích

Vậy các bước di chuyển của ô trống là: Trên - Trên - Trái - Dưới - Phải