5000	8000	12000
5001	8001	12001
5002	8002	12002
5003	8003	12003
5004		12004
5005		12005
5006		12006
5007		12007
5008		12008
5009		12009
5010		12010
5011		12011

(a) Trace of Process A

(b) Trace of Process B

(c) Trace of Process C

5000 = Starting address of program of Process A 8000 = Starting address of program of Process B 12000 = Starting address of program of Process C

Figure 3.2 Traces of Processes of Figure 3.1

1 2 3 4 5	5000 5001 5002		27 28	12004 12005	Time out
4	5003		29	100	
5	5004		30	101	
6	5005		31	102	
		Time out	32	103	
7	100		33	104	
8	101		34	105	
9	102		35	5006	
10	103		36	5007	
11	104		37	5008	
12	105		38	5009	
13	8000		39	5010	
14	8001		40	5011	
15	8002				Time out
	8003	V/O	41	100	Time out
15 16	8003	I/O request	41 42	100 101	Time out
15 16 17	8003	I/O request	41 42 43	100 101 102	Time out
15 16 17 18	8003 100 101	I/O request	41 42 43 44	100 101 102 103	Time out
15 16 17 18 19	8003 100 101 102	I/O request	41 42 43 44 45	100 101 102 103 104	Time out
15 16 17 18 19 20	8003 100 101 102 103	I/O request	41 42 43 44 45 46	100 101 102 103 104 105	Time out
15 16 17 18 19 20 21	8003 100 101 102 103 104	I/O request	41 42 43 44 45 46 47	100 101 102 103 104 105 12006	Time out
15 16 17 18 19 20 21 22	8003 100 101 102 103 104 105	I/O request	41 42 43 44 45 46 47 48	100 101 102 103 104 105 12006 12007	Time out
15 16 17 18 19 20 21 22 23	8003 100 101 102 103 104 105 12000	I/O request	41 42 43 44 45 46 47 48 49	100 101 102 103 104 105 12006 12007 12008	Time out
15 16 17 18 19 20 21 22 23 24	8003 100 101 102 103 104 105 12000 12001	I/O request	41 42 43 44 45 46 47 48 49 50	100 101 102 103 104 105 12006 12007 12008 12009	Time out
15 16 17 18 19 20 21 22 23 24 25	8003 100 101 102 103 104 105 12000 12001 12002	I/O request	41 42 43 44 45 46 47 48 49 50 51	100 101 102 103 104 105 12006 12007 12008 12009 12010	Time out
15 16 17 18 19 20 21 22 23 24	8003 100 101 102 103 104 105 12000 12001	I/O request	41 42 43 44 45 46 47 48 49 50	100 101 102 103 104 105 12006 12007 12008 12009	Time out

100 = Starting address of dispatcher program

shaded areas indicate execution of dispatcher process; first and third columns count instruction cycles; second and fourth columns show address of instruction being executed

Figure 3.3 Combined Trace of Processes of Figure 3.1