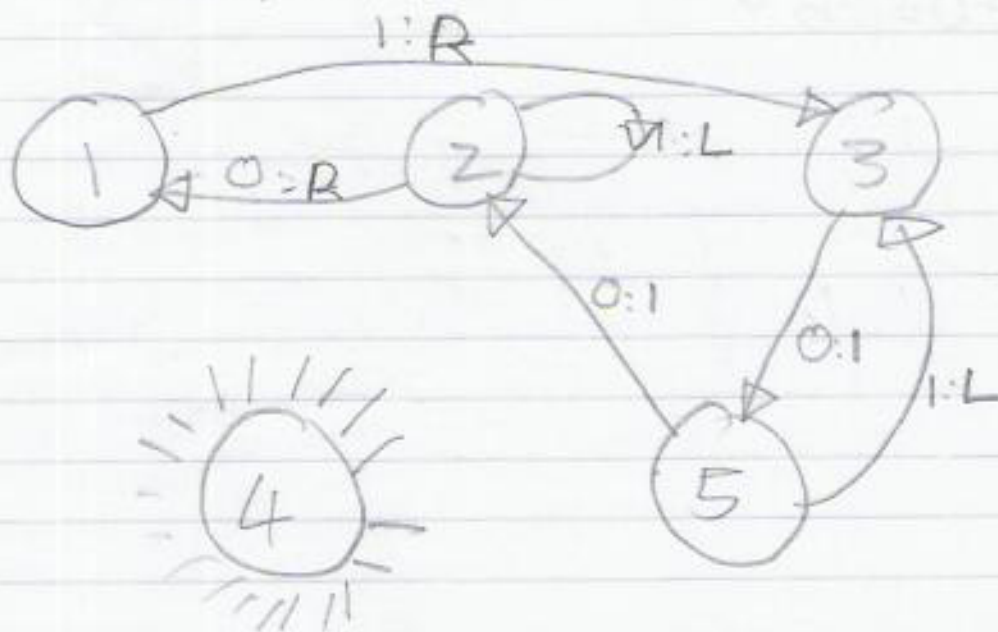


The set of quadruples is
 8) i) $q_1 | R q_3, q_2 | 0 R q_4, q_2 | L q_2, q_3 | 0 L q_5,$
 $q_3 | 1 q_2, q_5 | L q_3$



ii) a)

	32	16	8	4	2	1
left(13)			1	1	0	1
right(46)	1	0	1	1	1	0

The right no is written backwards and the head rests on the units part of the right hand no.

1 4 0 1 0 1 1 1 0 / ✓

b)

The head moves right, the new state is state 1.

1 1 0 1 0 1 1 1 0 1

16 8 4 2 1 2 4 8 16

New left no = $0 + 2 + 0 + 8 + 16 = 26$ ✓

New right no = $1 + 2 + 4 + 0 + 16 = 23$ ✓

Alternatively, the scanning head reads zero ∴ right no even ∴ if head moves right, the new right no is half the old one i.e. half of 46 = 23.

PTO

(5)