S_5

$(5), (41), (32), (31^2), (2^21), ($
$(21^3)(1^5)$; $r = 7$

S_6

$(6), (51), (42), (41^2), (3^2),$
$(321), (31^3), (21^4), (1^6)$; $r = 11$
$(2^3), (2^21^2),$

S_7

$(7), (61), (5,2), (5,1^2), (43),$
$(421), (41^3), (3^21), (32^2),$
$(321^2), (31^4), (2^31), (2^21^3),$
$(21^5), (1^7)$; $r = 15$

Partitions of S_5

$(5) \Rightarrow$ 5 1-cycles

$(41) \Rightarrow$ 3 1-cycles, 1 2-cycle

$(32) \Rightarrow$ 1 1-cycle, 2 2-cycles

$(31^2) \Rightarrow$ 2 1-cycles, 0 2-cycles, 1 3-cycle

$(2^2 1) \Rightarrow$ 0 1-cycles, 1 2-cycle,
1 3-cycle

$(2 1^3) \Rightarrow$ 1 1-cycle, 0 2-cycles,
0 3cycles, 1 4-cycle

$(1^5) \Rightarrow$ 0 1-cycles, 0 2cycles
0 3cycles, 0 4-cycles,
1 5-cycle.