cipal right ideals. But we may also consider decomposition (1) in this case.

Theorem 3 - *Let S be a n.r.s. semigroup (without non-zero annihilators), which is not right simple.*

Then

(4) $$S = S_2 \cup S_4 .$$

Proof.: Since in S there are no nonzero annihilators, it follows from the definition of n.r.s. semigroup that also $0 \notin S$. Therefore $S_0 = S_1 = \emptyset$, and it is not difficult to see that $S_3 = S_5 = \emptyset$.

Corollary 2 - *If S is n.r.s. and periodic (and not right simple), then $S = S_2$. Moreover, S is completely regular.*

Remarks: (i) Although a right simple semigroup is n.r.s., its decomposition is not a particular case of(4). In fact, if S is right simple, one has $S = S_3 \cup S_5$.

(ii) In general, a n.r.s. semigroup, is not completely regular, and conversely. On the other hand, it is shown in [2] that a n.r.s. semigroup is right regular.

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