











**Proof:**“Let  $I$  be a proper ideal of  $R$ . Since the primary ideals of a divided ring  $R$  linearly ordered. We conclude that  $\sqrt{I}$  is a prime ideal of  $R$ . Hence by theorem 3.4  $I$  is a 3-Absorbing primary ideal of  $R$ .”

**Theorem 3.13:** Let  $R$  be a commutative divided TFSS with identity. Thus every proper ideal of  $R$  is an AI 3-API of  $R$ . Particularly every proper ideal of a chained Ternary  $\Gamma$ -SO semiring is an AI 3-API.

**Proof:** Follows by Th3.3 & by Th3.12.

**Definition 3.14:** Let  $I$  be an AI 3-API of  $R$  if  $\sqrt{I} = P$ , then  $I$  is called an Almost P-3-API of  $R$ .

**Theorem 3.15:** Let  $E_1, E_2, \dots, E_n$  be an almost P-3-API  $R$  for some ideal  $P$  of  $R$  then

$E = \bigcap_{i=1}^n \sqrt{E_i}$  is an P-3-API of  $R$ .

**Proof:** First we show that  $\sqrt{E} = \bigcap_{i=1}^n \sqrt{E_i} = P$ .

Suppose that  $m\Gamma n\Gamma o\Gamma p\Gamma q \subseteq E - (E\Gamma)^2 E$ , for some  $m, n, o, p, q \in R$  and  $m\Gamma n\Gamma o \notin E$ .

Then  $m\Gamma n\Gamma o \subseteq E_i$  for some  $1 \leq i \leq n$ .

Thus  $n\Gamma o\Gamma p \subseteq \sqrt{E_i} = P$  or  $o\Gamma p\Gamma q \subseteq \sqrt{E_i} = P$  or  $m\Gamma n\Gamma p \subseteq \sqrt{E_i} = P$  or  $m\Gamma n\Gamma p \subseteq \sqrt{E_i} = P$  or  $n\Gamma o\Gamma q \subseteq \sqrt{E_i} = P$ .

### Conclusion:

In this paper we introduced the definition of Almost 3-Absorbing Primary ideal as a generalization of Primary ideals. We observe that Almost 3-Absorbing Primary ideals inherit some of the characteristics and axioms of Primary ideals also we made a study on Almost 3-Absorbing Primary ideals among other ideals.

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