J. Math. Kyoto Univ. (JMKYAZ)
13-1 (1973) 59-65

On t-ideals of an integral domain

To Professor Y. Akizuki for celebration of his 70th birthday

By

Toshio NISHIMURA

(Communicated by Professor Nagata, June 5, 1972)

Introduction.

In the following R will be an integral domain, and K will be the field of quotients of R. By an ideal of R, we shall mean a non-zero fractional ideal of R. If an ideal $A\subset R$, then we say that A is an *integral* ideal of R. Let A and B be ideals of R, then we shall define $A:B=\{x\mid x\in K, Bx\subset A\}$. In the special case where $A=R$, $R:B$ is often denoted by B^{-1}, and we shall write $(B^{-1})^n$ by B^{-n}, for brevity. $(A^{-1})^{-1}$ is often denoted by A_v, and we shall define $A_t=\bigcup_{B\subset A} B_v$ where B is a finitely generated ideal. Then it is clear that $A\subset A_t\subset A_v$.

Definition. Let A be an ideal of R. If $A=A_t$, then we say that A is a *t-ideal* of R. If $A=A_v$, then we say that A is a *V-ideal* of R. If $A=A_v$ and $AA^{-1}=A$, then we say that A is an *F-ideal* of R.

If $A_t=B_t$, then we say that A is *t-equal* to B and write $A\overset{t}{\sim}B$. If $A^{-1}=B^{-1}$, that is, $A_v=B_v$, then we say that A is *quasi-equal* to B and write $A\sim B$.

In [1], K. E. Aubert has introduced the following problem.

Problem. *Is a Krull ring characterized by the fact that any*