

INTISARI

IDEAL TERTUTUP- (m,n) LEMAH DAN RING REGULER VON NEUMANN- (m,n)

Oleh

IRMA SARI YULIANTI

24/538243/PPA/06802

Pada tesis ini, semua ring yang ditinjau adalah ring komutatif R dengan identitas 1_R . Diberikan bilangan-bilangan asli m dan n sedemikian sehingga $1 \leq n < m$. Ideal tertutup- (m,n) lemah merupakan perumuman dari ideal semi n -absorbing lemah dan ideal semiprima lemah. Sementara itu, ring reguler von Neumann- (m,n) memperumum ring reguler von Neumann. Pada tesis ini, akan dibahas sifat-sifat ideal tertutup- (m,n) lemah meliputi sifat irisan dan perkalian ideal-ideal tertutup- (m,n) lemah, keterkaitan ideal tertutup- (m,n) lemah dengan homomorfisma ring, sifat-sifat dari ideal tertutup- (m,n) lemah dalam ring faktor, ring hasil bagi, ring hasil kali Cartesius, ring lokal, dan idealisasi modul atas ring, serta sifat-sifat ring reguler von Neumann- (m,n) meliputi kestabilan sifat kereguleran terhadap konstruksi ring faktor, homomorfisma ring, ring hasil kali Cartesius, ring hasil bagi, dan idealisasi dari modul atas ring reguler von Neumann- (m,n) . Selain itu, dibahas pula syarat perlu dan syarat cukup agar setiap ideal sejati dari ring komutatif dengan identitas merupakan ideal tertutup- (m,n) lemah serta syarat perlu dan syarat cukup agar setiap ring komutatif dengan identitas merupakan ring reguler von Neumann- (m,n) .

ABSTRACT

WEAKLY (m, n) -CLOSED IDEALS AND (m, n) -VON NEUMANN REGULAR RINGS

By

IRMA SARI YULIANTI

24/538243/PPA/06802

Throughout this thesis, all rings considered are commutative rings R with identity 1_R . Let m and n be natural numbers such that $1 \leq n < m$. A weakly (m, n) -closed ideal generalizes weakly semi- n -absorbing ideal and weakly semi-prime ideal. Meanwhile, an (m, n) -von Neumann regular ring generalize von Neumann regular ring. This thesis investigates the properties of weakly (m, n) -closed ideals, including their intersection and multiplication properties, their relationship with ring homomorphisms, and their characteristics in quotient rings, rings of fractions, direct products, local rings, and the idealization of modules over rings. Additionally, it explores the properties of (m, n) -von Neumann regular rings, specifically focusing on the stability of the regularity property under the constructions of quotient rings, ring homomorphisms, direct products, rings of fractions, and the idealization of modules over (m, n) -von Neumann regular rings. Furthermore, this thesis discusses the necessary and sufficient conditions for every proper ideal of a commutative ring with identity to be a weakly (m, n) -closed ideal, as well as the necessary and sufficient conditions for every commutative ring with identity to be an (m, n) -von Neumann regular ring.