

Banach J. Math. Anal. 7 (2013), no. 2, 30–41

BANACH JOURNAL OF MATHEMATICAL ANALYSIS ISSN: 1735-8787 (electronic) www.emis.de/journals/BJMA/

WEYL TYPE THEOREM AND SPECTRUM FOR (p, k)-QUASIPOSINORMAL OPERATORS

D. SENTHILKUMAR¹, P. MAHESWARI NAIK ² AND D. KIRUTHIKA^{1*}

Communicated by J. A. Ball

ABSTRACT. Let T be a (p, k)-quasiposinormal operator on a complex Hilbert space \mathcal{H} , i.e $T^{*k}(c^2(T^*T)^p - (TT^*)^p)T^k \geq 0$ for a positive integer 0 ,some <math>c > 0 and a positive integer k. In this paper, we prove that the spectral mapping theorem for Weyl spectrum holds for (p, k) - quasiposinormal operators. We show that the Weyl type theorems holds for (p, k)- quasiposinormal. We prove that if T^* is (p, k)-quasiposinormal, then generalized *a*-Weyl's theorem holds for T. Also we prove that $\sigma_{jp}(T) - \{0\} = \sigma_{ap}(T) - \{0\}$ holds for (p, k)-quasiposinormal operator.

¹ Post Graduate and Research Department of Mathematics, Government Arts College (Autonomous), Coimbatore-641 018, Tamil Nadu, India.

E-mail address: senthilsenkumhari@gmail.com *E-mail address*: dkiruthi@gmail.com

 2 Department of Mathematics, Sri Ramakrishna Engineering College, Coimbatore-641 $022, {\rm Tamil}$ Nadu, India.

E-mail address: maheswarinaik210gmail.com

Date: Received: 20 June 2012; Accepted: 30 October 2012.

* Corresponding author.

²⁰¹⁰ Mathematics Subject Classification. Primary 47A10; Secondary 47B20.

Key words and phrases. (p, k)-quasiposinormal operator, p-posinormal, generalized a-Weyl's theorem, B-Fredholm.