International J. of Math. Sci. & Engg. Appls. (IJMSEA)
ISSN 0973-9424, Vol. 7 No. III (May, 2013), pp. 111-124

COUNTABLY HYPERCYCLIC AND WEYL'S THEOREM OF ELEMENTARY OF K^{**}-PARANORMAL OPERATORS

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Abstract

Let $B(H)$ be the set of all bounded linear operators acting on an infinite separable complex Hilbert space H. In this paper we prove the following

1. If T is a pure k^* paranormal operator, then T has no eigenvalues.
2. Give an example of k^*-paranormal operator which is not countably hypercyclic.
3. If T is a k^*-paranormal operator on a Hilbert space H, then for any open set $U \subseteq C$, we have $H_{T^*}(U)^{\perp} = H_T(C \setminus U)$.
4. If T is a pure k^*-paranormal operator for which $H_{T^*}(D)$ is finite dimensional, then $H_{T^*}(D) = \{0\}$.
5. If T is a pure k^*-paranormal operator on a separable Hilbert space H, then T^* is countably hypercyclic if for every hyperinvariant subspace M of $T, \sigma(T|_M) \cap (C \setminus \overline{D}) \neq \phi$ and $\sigma(T) \cap D \neq \phi$.
6. If T is a K^*-paranormal operator, then T^* has a bounded set with dense orbit if and only if for every hyperinvariant subspace M of $T, \sigma(T|_M) \cap (C \setminus \overline{D}) \neq \phi$.
7. Let $T \in B(H)$ be a k^*-paranormal, then generalized Weyl's theorem holds for T.
8. If $T^* \in B(H)$ is a k^*-paranormal, then generalized Weyl's theorem holds for T.
9. Suppose that $T, S^* \in B(H)$ are k^*-paranormal, then generalized Weyl's theorem holds for T, then $\delta_{T,S}$ has SVEP.
10. Let $T, S^* \in B(H)$ be k^*-paranormal, then $d_{S,T}$ satisfies generalized Weyl's theorem.
11. Let $T, S^* \in B(H)$ be k^*- paranormals, then generalized Weyl's theorem holds $f(d_{T,S})$ for every $f \in H(\sigma(d_{T,S}))$.
12. Let $T, S^* \in B(H)$ be k^*-paranormal, then generalized Weyl's theorem holds $f(d^*_{T,S})$ for every $f \in H(\sigma(d^*_{T,S}))$.
