Extended Weyl type theorems

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In this talk we will consider the new properties (b), (gb), (ab), (gab), (aw) and (gaw) introduced recently and jointly by the author and H. Zariouh, as a new extended Weyl type theorems. We will characterize these properties and we will study their preservation under finite rank or nilpotent perturbations. As an example of the results obtained, we show that if T is a bounded linear operator acting on a Banach space X, then T possesses property (gb) if and only if T possesses property (gab) and $\mathrm{ind}(T - \lambda I) = 0$ for all $\lambda \in \sigma_a(T) \backslash \sigma_{SBF_+^-}(T)$; where $\sigma_{SBF_+^-}(T)$ is the essential semi-B-Fredholm spectrum of T and $\sigma_a(T)$ is the approximate spectrum of T.