Degree Sequences and Edge Connectivity

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For each positive integer k, we give a finite set of Bondy–Chvátal type conditions to a nondecreasing sequence $d = (d_1, \ldots, d_n)$ of nonnegative integers such that every graph on n vertices with degree sequence at least d is k-edge-connected. These conditions are best possible in the sense that whenever one of them fails for d then there is a graph on n vertices with degree sequence at least d which is not k-edge-connected.