

Exercise Sheet 5

COMP6741: Parameterized and Exact Computation

2016, Semester 2

1. Recall that an *independent set* of a graph $G = (V, E)$ is a subset of pairwise non-adjacent vertices.

INDEPENDENT SET

Input: Graph G , integer k

Question: Does G have an independent set of size k ?

- Show that INDEPENDENT SET is FPT for parameter q , where $q = k + \Delta(G)$ and $\Delta(G)$ denotes the maximum degree of G .