What are the best k hashes and m bits values to store one million n keys (E.g. e52f43cd2c23bb2e629615374838276 4) suppose we use the same MD5 hash key from pickle_hash.py and explain why?

For K, we have equation to calculate optimal number of hash functions
$k=(m/n)\ln(2)$

We using the same MD5 hash key which means false positive rate fp_prob =0.05.

$fp\_ptob = (1-e^{-kn/m})^k$

n=1,000,000

After simplify, $K = -\ln(fp\_prob)/\ln(2) = 4$

m = 5,771,172