1. “Tar” and “Rat” would has to the same function using HASH_FUNCTION1 and would not using HASH_FUNCTION2.

2. Because if you were storing values with keys and you used the hash function to navigate to the right key containing a value you need may be innacurate. The second hash function uses the index position and the ascii value. Conscequently the keys are significantly more unique which makes lookup more accurate and faster (O(l)).

3. Not if using the same input file. The same number of hashlinks would be used using both hash functions.

4. no, not when using the same file . the TableLoadFunction calculates the load based on the ratio of number of links to the number of buckets. it does not account for empty buckets. With both functions it will deliver the same result.

5. yes. HashFunction1 would result in a great number of collisions. Thus, the hash table using HashFunction 1 would have more empty buckets due hash values that are not as unique.

6. Yes, because modulous is used for calculating the placement of buckets and prime numbers have fewer common factors. If a composite number is used there is greater chance of collision and thus greater number of buckets.