1707. Maximum XOR With an Element From Array

Description

You are given an array `nums` consisting of non-negative integers. You are also given a `queries` array, where `queries[i] = [x_i, m_i]`.

The answer to the `i^th` query is the maximum bitwise `XOR` value of `x_i` and any element of `nums` that does not exceed `m_i`. In other words, the answer is `max(nums[j] XOR x_i)` for all `j` such that `nums[j] <= m_i`. If all elements in `nums` are larger than `m_i`, then the answer is `-1`.

Return *an integer array* `answer` *where* `answer.length == queries.length` *and* `answer[i]` *is the answer to the* `i^th` *query.*

Example 1:

```
Input: nums = [0,1,2,3,4], queries = [[3,1],[1,3],[5,6]]
Output: [3,3,7]
Explanation:
1) 0 and 1 are the only two integers not greater than 1. 0 XOR 3 = 3 and 1 XOR 3 = 2. The larger of the two is 3.
2) 1 XOR 2 = 3.
3) 5 XOR 2 = 7.
```

Example 2:

```
Input: nums = [5,2,4,6,6,3], queries = [[12,4],[8,1],[6,3]]
Output: [15,-1,5]
```

Constraints:

- `1 <= nums.length, queries.length <= 10^5`
- `queries[i].length == 2`
- `0 <= nums[j], x_i, m_i <= 10^9`