

## Q1 Instructions

0 Points

To receive full credit on this quiz, you must score at least 50%.

The Github repo for Lecture 10 is at:

<https://github.com/ucsd-cse12-w21/ucsd-cse12-w21.github.io/tree/master/lectures/lecture-10>

## Q2 Big O

1 Point

Check which of the following are true:

☐  $n + 5n^3 + 8n^4 = O(n)$

☐  $n! + n^2 = O(n \log(n))$

☒  $2^n + n \log(n) = O(n!)$

☐  $1/(n^2) + 5 = O(1/n)$

### Q3 Time Complexities

1 Point

Given  $n$  is a very large number, which of the following correctly orders the time complexities from fastest to slowest:

- ☐  $n, \log(n), n^2, n!, 2^n$
- ☐  $\log(n), n, n^2, n!, 2^n$
- ☐  $n, 2^n, n^2, n!, \log(n)$
- ☒  $\log(n), n, n^2, 2^n, n!$
- ☐  $\log(n), n, n!, n^2, 2^n$
- ☐  $\log(n), n, n!, 2^n, n^2$