Quiz 2 EECE4040 Spring 2022

Due Jan 24 at 11:59pm **Points** 10 **Questions** 10
Available Jan 24 at 10am - Jan 24 at 11:59pm about 14 hours **Time Limit** 15 Minutes

This quiz was locked Jan 24 at 11:59pm.

Attempt History

	Attempt	Time	Score
LATEST	**Attempt 1**	6 minutes	10 out of 10

Score for this quiz: **10** out of 10
Submitted Jan 24 at 11:01pm
This attempt took 6 minutes.

Question 1

1 / 1 pts

For a = 680 and b = 43 after one iteration of Euclid's GCD algorithm for computing the gcd(a,b) the values of a and b are

- a = 680, b = 250
- a = 43, b = 13
- a = 43, b = 0
- a = 43, b = 680
- Correct! a = 43, b = 35

Question 2

1 / 1 pts

The worst-case complexity of Euclid's algorithm for computing the gcd(a,b) occurs when a and b are

- consecutive powers of 2.
- consecutive Harmonic numbers.
- consecutive prime numbers.

Correct!

- (selected) consecutive Fibonacci numbers.
- differ by 1.

Question 3

1 / 1 pts

The worst-case complexity of an algorithm is

- input for which algorithm is the slowest
- The fewest basic operations the algorithm performs for an input of size n

Correct!

- (selected) The most basic operations the algorithm performs for an input of size n
- The most basic operations the algorithm performs
- input for which algorithm is fastest
- The fewest basic operations the algorithm performs for an input of size n

Question 4

1 / 1 pts

The best-case complexity of an algorithm is the

- fastest computing time of the algorithm
- input for which algorithm is the slowest
- most basic operations the algorithm performs
- input for which algorithm is fastest
- Correct! fewest basic operations the algorithm performs for an input of size n

Question 5

1 / 1 pts

The average complexity of an algorithm is the

- average of the best-case and worst-case complexities
- Correct! expected number of basic operations performed over all inputs of size n
- expected number of basic operations performed
- expected value of a uniform distribution
- average measure of how complex an algorithm is for an input of size n

Question 6

1 / 1 pts

An efficient algorithm for polynomial evaluation

- Newton's rule

Correct!

- (selected) Horner's rule
- Euclid's rule
- Phat rule
- Fast Polynomial Evaluation (FPE)

Question 7

1 / 1 pts

The worst-case complexity W(n) of Linearsearch for a list of size n is

Correct!

- $n \log_2 n$
- $\log_2 n$
- (selected) n
- n^2
- 1
- $\frac{n+1}{2}$

Question 8

1 / 1 pts

The average complexity A(n) of Linearsearch for a list of size n assuming the list elements are distinct and the search element is equally likely to be found in any position is

- $\log_2 n$

- $2n$
- Correct! $\frac{n+1}{2}$
- n
- 1

Question 9

1 / 1 pts

1 + 2 + 3 + ... + 50 equals

- Correct! 1275
- 9900
- 2050
- 1050
- 10100

Question 10

1 / 1 pts

Let a = fib(n) and b = fib(n-1) , where fib(n) is the nth Fibonacci number, $n \geq 2$. After one iteration of Euclid's GCD algorithm the values of a and b are respectively:

- f(n-2) and fib(n-3)
- fib(n) and fib(n-2)

Correct!

- (●) fib(n-1) and fib(n-2)
- ( ) fib(n-1) and fib(n)
- ( ) fib(n-1) and 0

Quiz Score: **10** out of 10