

[Dashboard](#) / [Courses](#) / [Winter 2021-22](#) / [BTech Semester 4](#) / [CS268](#) / [Assignment 3-25-02-2022](#) / [Assignment 3-25-02-2022](#)

**Started on** Friday, 25 February 2022, 1:50 PM

**State** Finished

**Completed on** Friday, 25 February 2022, 1:56 PM

**Time taken** 5 mins 41 secs

**Marks** 4.00/4.00

**Grade** **10.00** out of 10.00 (**100%**)

Question **1**

Complete

Mark 1.00 out of 1.00

A half adder is implemented with XOR and AND gates. A full adder is implemented with two half adders and one OR gate. The propagation delay of an XOR gate is twice that of an AND/OR gate. The propagation delay of an AND/OR gate is 1.2 microseconds. A 4-bit ripple-carry binary adder is implemented by using full adders. What is the total propagation time of this 4-bit binary adder in microseconds.

☐ a. 19.5 ms

☐ b. 19.8 ms

☒ c. 19.2 ms

☐ d. 20 ms

Question **2**

Complete

Mark 1.00 out of 1.00

What is true for the look ahead carry adder?

- ☒ a. All of the mentioned
- ☐ b. **To reduce the computation time, there are faster ways to add two binary numbers by using carry lookahead adders**
- ☐ c. **The carry propagator is propagated to the next level whereas the carry generator is used to generate the output carry ,regardless of input carry.**
- ☐ d. **They work by creating two signals P and G known to be Carry Propagator and Carry Generator.**

Question **3**

Complete

Mark 1.00 out of 1.00

**Two 1's with a carry-in of 1 are added using a ripple carry adder. What are the outputs?**

- ☐ a. 0,1
- ☐ b. 0,0
- ☐ c. 1,0
- ☒ d. 1,1

Question **4**

Complete

Mark 1.00 out of 1.00

**For  $X = (A \oplus B) C + (A \oplus B) C$  &  $Y = AB + (A \oplus B) C$ , choose the correct option.**

- ☐ a. None of the mentioned
- ☐ b. Are the expressions for the Full subtractor
- ☐ c. Are the expressions for the carry look ahead adder
- ☒ d. Are the expressions for the ripple carry adder

[← Assignment 2-18-02-2022](#)

Jump to...

[Assignment 4-04-03-2022 ►](#)