

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY

Department of Computer Science and Engineering

January 2021 CSE 206 Online Assignment on

Basics of Multiplexers (Section: A2 & B2)

Implement the following logic circuit using exactly one 8x1 multiplexer and one 2x1 multiplexer. You cannot use any other logic component.

$$1. f(A, B, C, D) = \Sigma(0, 1, 2, 6, 11, 15)$$

$$2. f(A, B, C, D) = \Sigma(0, 1, 2, 5, 11, 13)$$

$$3. f(A, B, C, D) = \Sigma(5, 7, 10, 11, 12, 14)$$

$$4. f(A, B, C, D) = \Sigma(0, 3, 6, 9, 10, 11)$$

$$5. f(A, B, C, D) = \Sigma(0, 1, 2, 4, 11, 12)$$

Divide your roll number by 5. The remainder is your assigned problem if the remainder is non-zero, otherwise problem 5 is.

Create a PDF document containing a hand-written circuit diagram along with the truth table. Submit the PDF file and the .circ file simulated in Logisim in a single zip file named by your student ID.