

North South University
Department of Electrical and Computer Engineering
Final Examination, Fall 2021
Digital Logic Design
CSE231 Section-14

Full Marks: 30

Duration: 60 mins.

Answer the following questions

1.(a) Construct a multiplier circuit which multiplies Two 3-bit numbers. (5)

1(b) Generate a magnitude comparator which checks if two 2- bit numbers are greater or smaller than each other. (5)

2a) Design a logic circuits that has three inputs A_5, A_2 and A_0 and some select and enable inputs so that it functions according to the requirement given below: (5)

S_1	S_0	Z
0	0	A_0
0	1	A_5
1	0	A_2

2b) Construct a 4X16 decoder using 3-to-8 Decoders. (5)

3a) For the following Flipflop show the truth table: (3)

3b) How output state of a D flipflop will vary for the following signal variation: (3)

3c) Make a 6-bit serial register. (4)