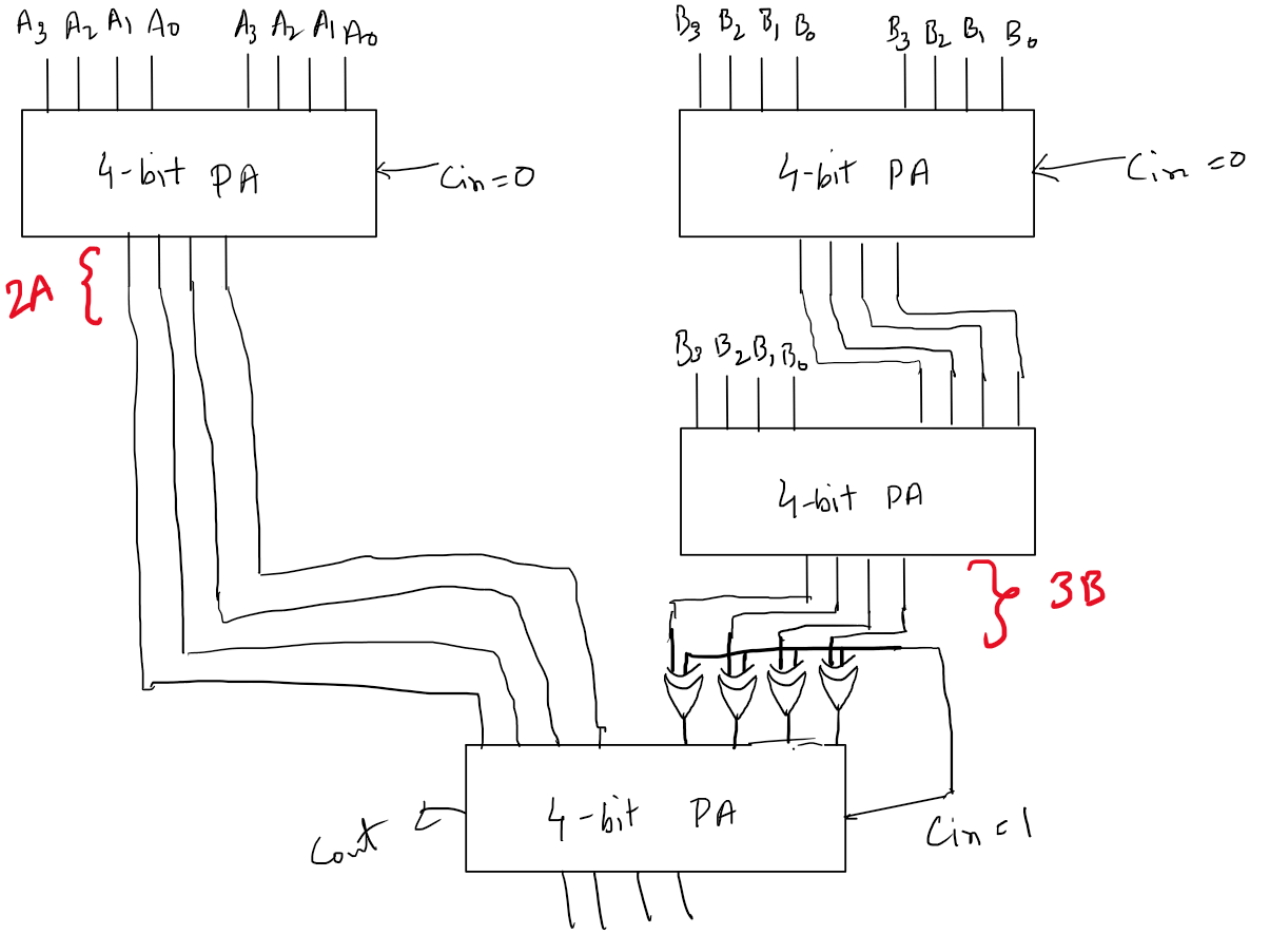
BRAC UNIVERSITY
Inspiring Excellence

CSE260: Digital Logic Design
Summer 2025
Makeup Quiz
Duration: 30 minutes

B

Name:	ID:	Section:

1.	Design a circuit that produces (2A - 3B) using 4-bit parallel adders. Assume the value of 2A and 3B to be within 4-bit numbers. Use external gates if necessary.	10
2.	A RAM is constructed using a 11x2048-size decoder with 24 binary cells per word. a. How many words does the memory hold? b. How many flip-flops are needed in the MBR? c. How many address lines are needed? d. How many flip-flops are required in the MAR? e. What is the total capacity of this RAM in KB?	5



2.

a. 2048
b. 24
c. 11
d. 11
e. Capacity = 2048 x 24 = 49152 bits / 8 x 1024 = 6 KB