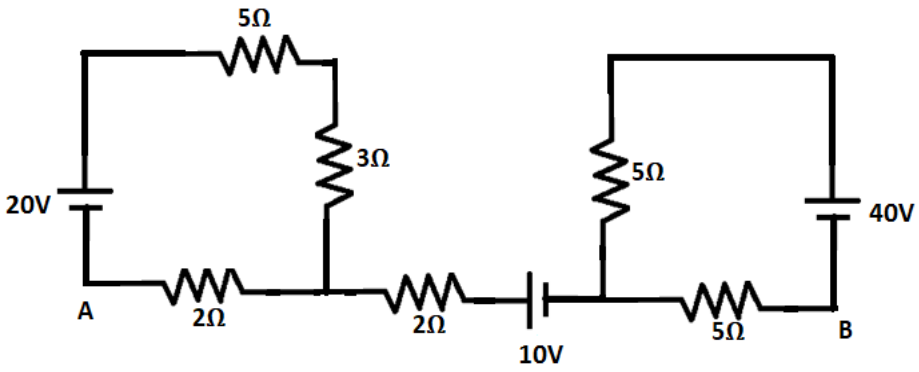
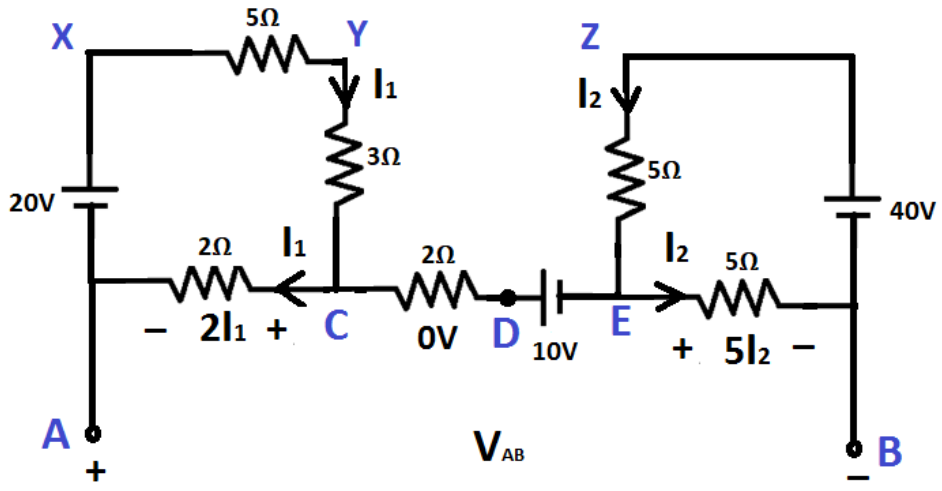
Lecture 1

2. Find the voltage V_{AB} in the network shown:



SOLUTION:



KVL (AXYCA): $+20-5I_1-3I_1-2I_1 = 0$; Hence, $I_1 = 2A$

KVL (BZEB): $+40-5I_2-5I_2 = 0$; Hence, $I_2 = 4A$

KVL (ACDEBA): $+2I_1-10-5I_2+V_{AB} = 0$; Hence, $V_{AB} = 26V$