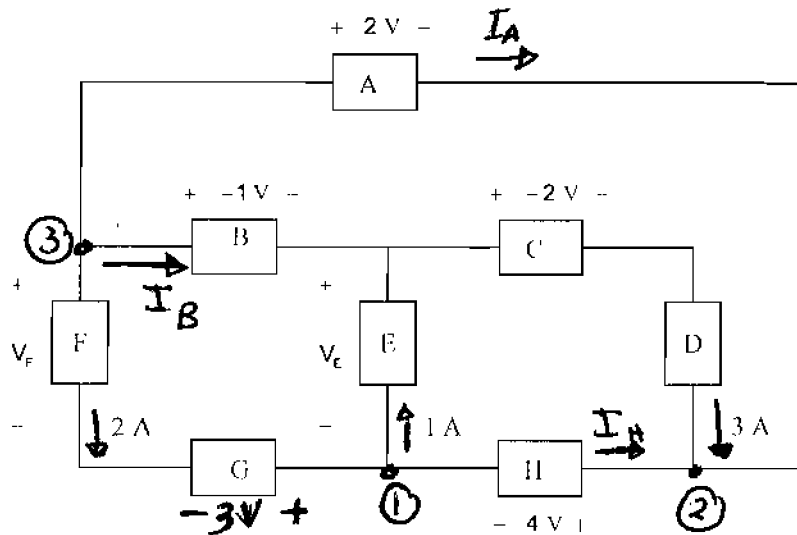


EE 204 -08 Fall 2009
Quiz I

SEC	SER	ID	NAME	KEY
-----	-----	----	------	-----



For the Circuit shown above Find the followings :

- (a) The voltages V_F , V_E , I_A ?
- (b) The power absorb by the element B ?

(a)

KVL on Loop (F, A, D, H, G)

$$-V_F + 2 + 4 + 3 = 0 \Rightarrow \underline{\underline{V_F = 9V}}$$

KVL on Loop (F, B, E, G)

$$-V_F + (-1) + V_E + 3 = 0 \Rightarrow \underline{\underline{V_E = 7V}}$$

KCL at ① $1 - 2 + I_H = 0 \Rightarrow I_H = 1 \text{ A}$

KCL at ② $I_H + 3 + I_A = 0 \Rightarrow \underline{\underline{I_A = -4 \text{ A}}}$

(b) KCL at ③ $I_B + 2 + I_A = 0 \Rightarrow I_B = 2 \text{ A}$

$$P_B = + (-1)(2) = \underline{\underline{-2 \text{ W}}}$$