

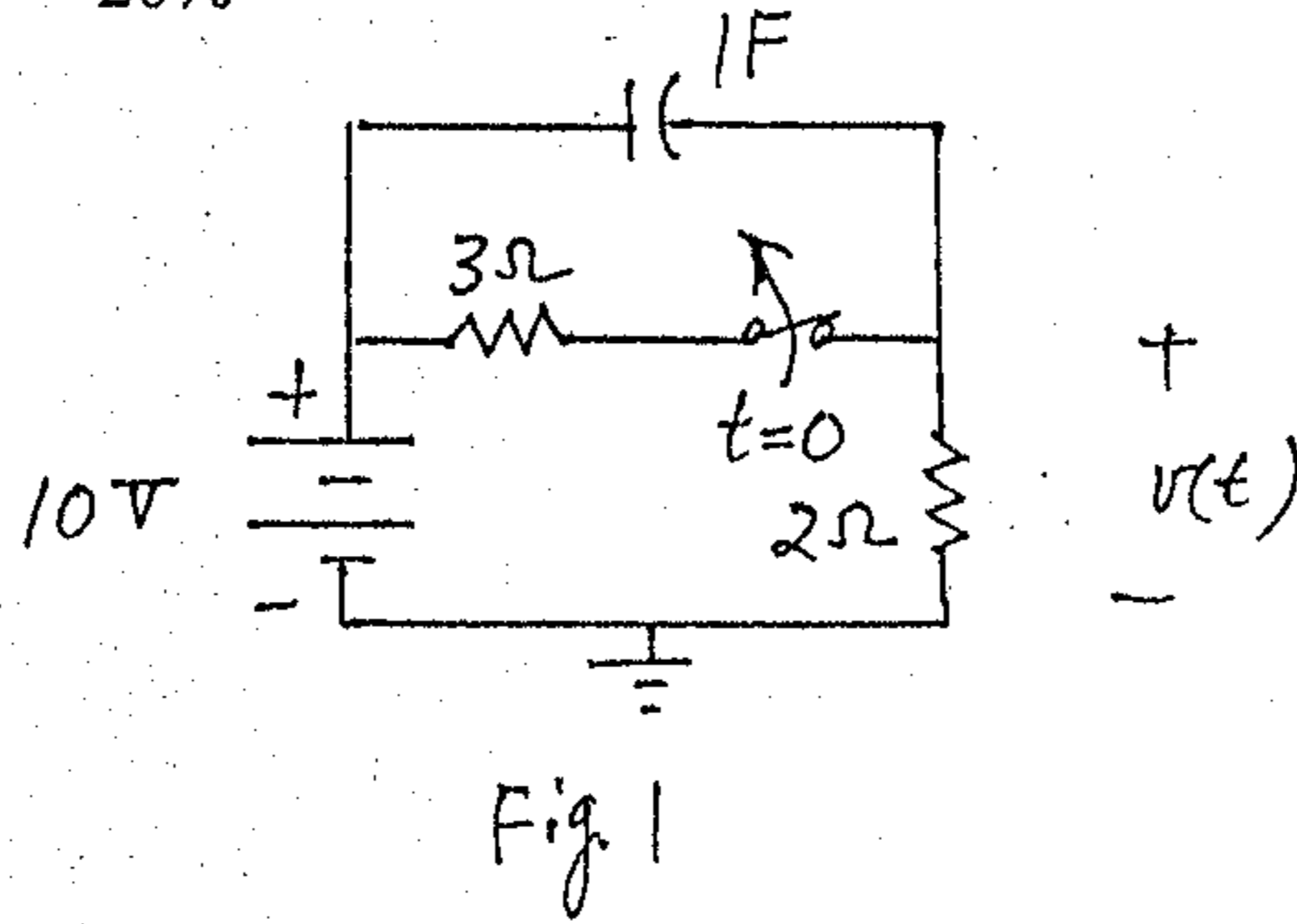
# 淡江大學八十八學年度日間部轉學生招生考試試題

系別：電機工程學系三年級

科目：電路學

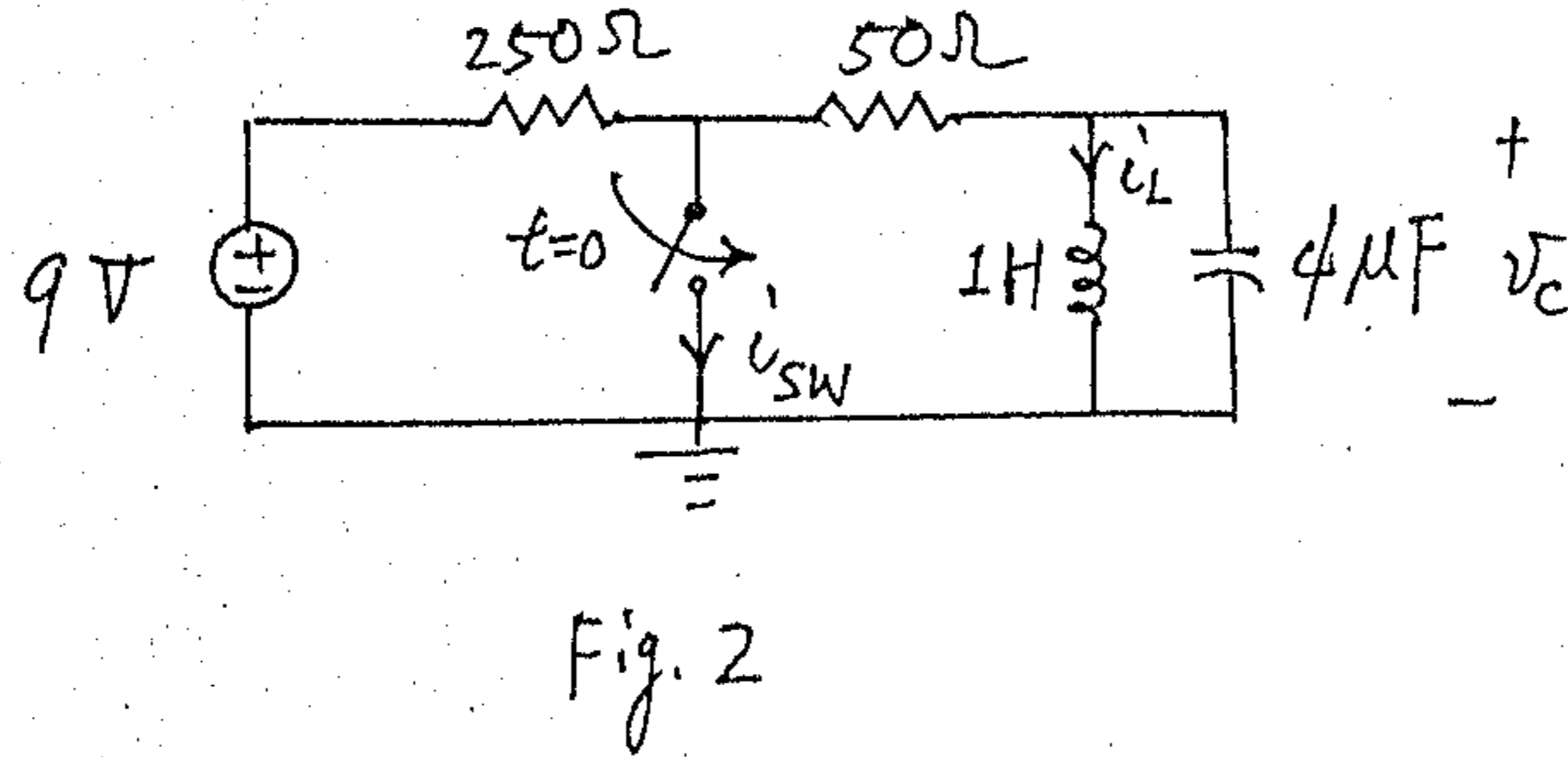
本試題共 / 頁

1. (Fig. 1) The switch has been closed for a long time and is opened at  $t=0$ . Find the voltage  $v(t)$  for  $t \geq 0$ . 20%

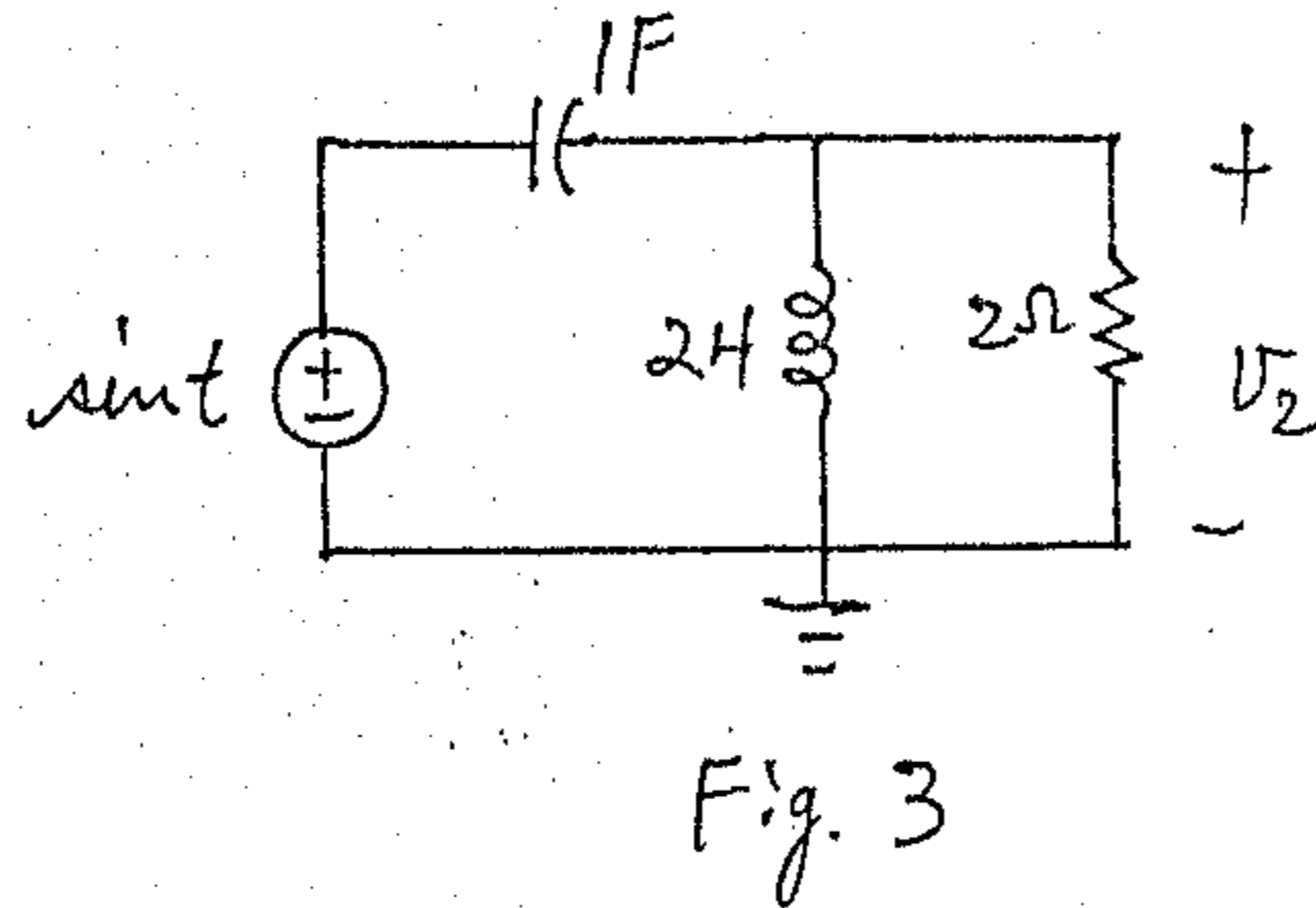


2. (Fig. 2) The switch has been open for a long time and is closed at  $t=0$ .

- (a) Find the inductor current  $i_L(t)$  for  $t \geq 0$ .  
 (b) Find the capacitor voltage  $v_C(t)$  and current through the switch  $i_{sw}(t)$  for  $t \geq 0$ .  
 30%



3. (Fig. 3) If all variables in the network have reached the steady state, find  $v_2(t)$ . 25%



4. (Fig. 4) Switch  $S_1$  has been closed for a long time and is opened at  $t=0$ . Use Laplace transform method to find  $v_2(t)$  for  $t \geq 0$ . 25%

