Question 1: Find f(t) if F(s) is given by the expression

$$F(s) = \frac{24s}{(s+2)(s+4)(s+6)}$$

Question 2: Find f(t) if F(s) is given by the expression

$$F(s) = \frac{4(s+4)}{s(s^2+8s+20)}$$

Question 3: Find f(t) if F(s) is given by the expression

$$F(s) = \frac{12(s+2)}{(s^2+2s+1)(s+3)}$$

Question 4: Given the function

$$F(s) = \frac{24(s+10)}{s(s+2)(s+4)}$$

Find the initial and final values of the function by evaluating it in both the s-domain and time domain.

Question 5: Find $v_0(t)$, $t > 0$ in the circuit in Fig. 14.1 using (a) nodal analysis, (b) source transformation and (c) Norton's Theorem.

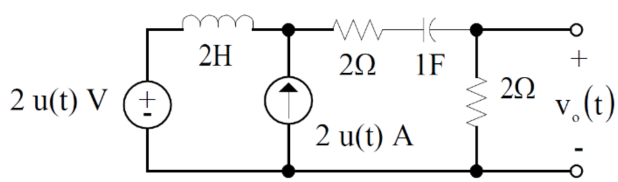

Fig. 14.1

Question 6: Find $i_0(t)$, $t > 0$ in the circuit in Fig. 14.2 using (a) loop equations and (b) Thevenin's Theorem

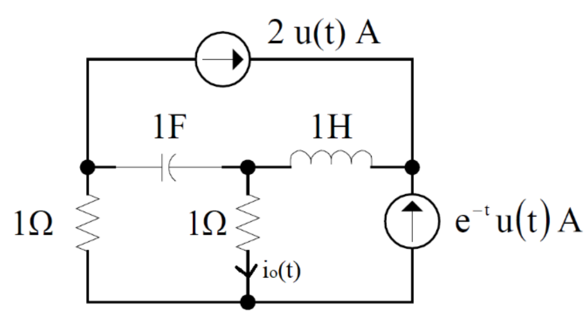

Fig. 14.2

Question 7: Find $i_0(t)$, $t > 0$ in the circuit in Fig. 14.3.

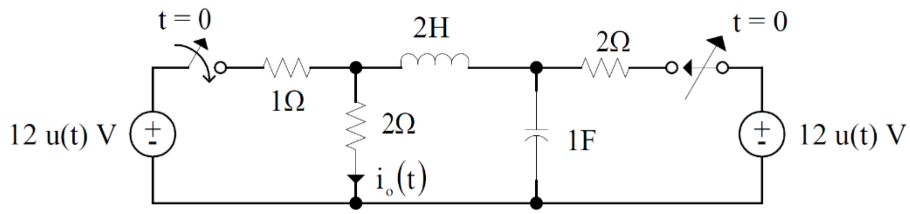

Fig. 14.3

Question 8: Given the network in Fig. 14.4, determine (a) the voltage transfer function $G(s) = \frac{V_0(s)}{V_s(s)}$,

(b) from the G(s), drew pole-zero map (c) is the system stable? (d) find the step response.

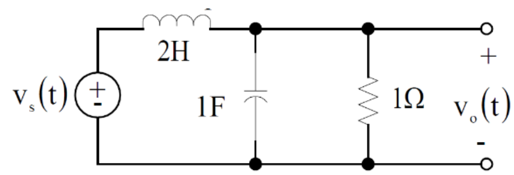

Fig. 14.4

Question 9: For the network shown in Fig. 14.5, (a) Find the voltage transfer function $G(s) = \frac{V_0(s)}{V_S(s)}$,

(b) from the G(s), drew pole-zero map (c) is the system stable (d) find the impulse response.

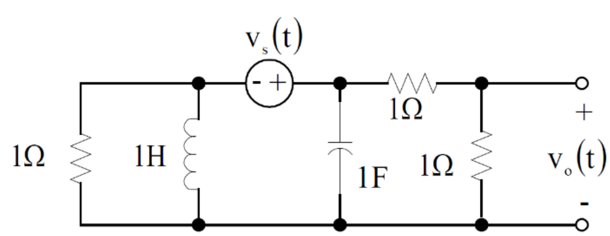

Fig. 14.5