	1. Allowed Tools: Calculators
Note	2. Leaving the classroom during the exam period will be considered as submitting the exam.
	3. Every calculation process yields a score. (無計算過程不計分)
	4. The answer ought to be presented in decimal format, not as a fraction. SID: 6. Jun. 2024
Name	: SID : 6. Jun. 2024
1 (40)	%) Determine f(t) from the given function F(s).
(a)	$F(s) = \frac{s+1}{s-1}$, (b) $F(s) = \frac{s-1}{s+1}$, (c) $F(s) = \frac{1}{s^2+s+\frac{2}{3}}$, (d) $F(s) = \frac{s-2}{s^2+2s+1}$.
	11 -5% +
2. (20%	%) For the network shown in Fig. 1.
(a) F	Find the initial values $i_L(0+)$ and $v_c(0+)$.
(b) S	show the equivalent circuit in s-domain for t>0.
(a) U	Use Laplace Transform to determine $v_o(t)$ for $t>0$.
	(41)
3 (40%	6) For the network shown in Fig. 2.
	ind the initial values $i_L(0+)$ and $v_c(0+)$.
	how the equivalent circuit in s-domain for t>0.
1070 50	Use Laplace Transform to determine $v_x(t)$ for $t>0$.
100 M. T. C. C.	
NAC THE PARTY OF	how the eigenvalues of $v_x(t)$ from (c).
(e) R	ecalculate $v_x(t)$ for t>0 using the eigenvalues and initial values.
	Tie (5")
	u(t) V
+	f(t) 10 m
	+ v _c - +
	$1 \Omega \stackrel{>}{=} U(-t) A \stackrel{\frown}{=} 1 H \stackrel{\frown}{=} i_L \qquad 1 \Omega \stackrel{>}{=} V_{\sigma}(t)$
	Se (sti)t j t
	- 1) e
	Fig. 1
۵,	$\frac{1}{2}\Omega$ v_x if
)°+	$(f(t)) \qquad \frac{\frac{1}{2}n}{1 + \nu_{c}} \qquad , 54(c)$
	7 1 7
(P)	Υ 1 1 1-7
15	1+5
	Fig. 2
7	
5	-1 52+25+1 17 35 5-1
	1573

NTUST Circuit Theory: Final (CH12-13) 100 points total