## Filter Summary Report: TIA,simple,Z2,Z5,ZL

## Generated by MacAnalog-Symbolix

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10.46INVALID-ORDER-46 $Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	74
10.47INVALID-ORDER-47 $Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$	74
10.48INVALID-ORDER-48 $Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$	74
10.49INVALID-ORDER-49 $Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$	74
10.50INVALID-ORDER-50 $Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$	74
10.51INVALID-ORDER-51 $Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$	75

10.52INVALID-ORDER-52 $Z(s) = \left(\right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$L_5s + R_5 + \frac{1}{C_5s}$	$, \frac{L_L s}{C_L L_L s^2 + 1}$		 	 	75
10.53INVALID-ORDER-53 $Z(s) = \left( \begin{array}{c} \\ \end{array} \right)$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$L_5s + R_5 + \frac{1}{C_5s}$	$, L_L s + R_L +$	$\left(\frac{1}{C_L s}\right)$	 	 	75
10.54INVALID-ORDER-54 $Z(s) = \left( \right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$L_5s + R_5 + \frac{1}{C_5s}$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L}}$	$\left(\frac{1}{s}\right)$	 	 	75
10.55INVALID-ORDER-55 $Z(s) = \left(\right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$L_5s + R_5 + \frac{1}{C_5s}$	$, \frac{L_L s}{C_L L_L s^2 + 1} +$	$R_L$ )	 	 	75
10.56INVALID-ORDER-56 $Z(s) = \left( \right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$L_5s + R_5 + \frac{1}{C_5s}$	$\frac{R_L \left(L_L s + \frac{1}{C_L s} $	$\left(\frac{\overline{s}}{\overline{s}}\right)$	 	 	76
10.57 INVALID-ORDER-57 $Z(s) = \Big($	/		\		 	 	76
10.58INVALID-ORDER-58 $Z(s) = \left( \right.$	$(\infty, R_2, \infty, \infty,$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \overline{C}$	$\left(\frac{R_L}{C_L R_L s + 1}\right)$		 	 	76
10.59INVALID-ORDER-59 $Z(s) = \left( \right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ I$	$R_L + \frac{1}{C_L s}$ .		 	 	76
10.60INVALID-ORDER-60 $Z(s) = \left( \right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ I$	$L_L s + \frac{1}{C_L s}$ .		 	 	76
10.61INVALID-ORDER-61 $Z(s) = \left( \right.$	$(\infty, R_2, \infty, \infty,$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \overline{C}$	$\left(\frac{L_L s}{C_L L_L s^2 + 1}\right)$ .		 	 	77
10.62INVALID-ORDER-62 $Z(s) = \left( \right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ I$	$L_L s + R_L + \frac{1}{C_L}$	$\left(\frac{1}{a^s}\right) \cdot \cdot \cdot \cdot$	 	 	77
10.63INVALID-ORDER-63 $Z(s) = \left( \right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \overline{C}$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$		 	 	77
10.64INVALID-ORDER-64 $Z(s) = \left( \right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \overline{C}$	$\frac{L_L s}{C_L L_L s^2 + 1} + R_L$	<i>i.</i> )	 	 	77
10.65INVALID-ORDER-65 $Z(s) = \left( \right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}},  \frac{H}{L_5 s}$	$\left(\frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$		 	 	77
10.66 INVALID-ORDER-66 $Z(s) = \Big($	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$\frac{1}{C_L s}$ )		 	 	78
10.67INVALID-ORDER-67 $Z(s) = \left(\right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$\frac{R_L}{C_L R_L s + 1}$ .		 	 	78
10.68INVALID-ORDER-68 $Z(s) = \left(\right.$	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$R_L + \frac{1}{C_L s}$		 	 	78
10.69INVALID-ORDER-69 $Z(s) = ($	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$L_L s + \frac{1}{C_L s}$		 	 	78
10.70INVALID-ORDER-70 $Z(s) = ($	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$\frac{L_L s}{C_L L_L s^2 + 1}$ .		 	 	78
10.71INVALID-ORDER-71 $Z(s) = ($	$\infty$ , $R_2$ , $\infty$ , $\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$L_L s + R_L + \frac{1}{2}$	$\left(\frac{1}{C_L s}\right) \cdot \cdot \cdot$	 	 	78

10.72INVALID-ORDER-72 $Z(s) = \Big($	$(\infty, R_2, \infty, \infty,$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}$		 	 	79
10.73 INVALID-ORDER-73 $Z(s) = \Big($	$(\infty, R_2, \infty, \infty,$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$\frac{L_L s}{C_L L_L s^2 + 1} + R_I$	E)	 	 	79
10.74INVALID-ORDER-74 $Z(s) = \left( \right.$	$(\infty, R_2, \infty, \infty,$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$\frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$	)	 	 	79
10.75INVALID-ORDER-75 $Z(s) = \left( \right.$	\	0.50	/		 	 	79
10.76INVALID-ORDER-76 $Z(s) = ($	$(\infty, R_2, \infty, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},  c$	$\left(\frac{R_L}{C_L R_L s + 1}\right) \cdot \cdot \cdot$		 	 	79
10.77INVALID-ORDER-77 $Z(s) = \left( \right.$	(	053	/		 	 	80
10.78INVALID-ORDER-78 $Z(s) = ($	(	- 3 -	/		 	 	80
10.79INVALID-ORDER-79 $Z(s) = ($	$(\infty, R_2, \infty, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},  c$	$\frac{L_L s}{C_L L_L s^2 + 1}$		 	 	80
10.80INVALID-ORDER-80 $Z(s) = ($	\	050		$\left( \cdot \right) \cdot \cdot \cdot \cdot$	 	 	80
10.81INVALID-ORDER-81 $Z(s) = ($	$(\infty, R_2, \infty, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},  \frac{1}{C_5 s}$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} $		 	 	80
10.82INVALID-ORDER-82 $Z(s) = ($	\	- 0	/	)	 	 	81
10.83INVALID-ORDER-83 $Z(s) = ($	$(\infty, R_2, \infty, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$		 	 	81
10.84INVALID-ORDER-84 $Z(s) = ($	$\infty$ , $\frac{1}{C_2s}$ , $\infty$ , $\infty$	$R_5, R_L$			 	 	81
10.85INVALID-ORDER-85 $Z(s) = ($	$\infty$ , $\frac{1}{C_2s}$ , $\infty$ , $\infty$	$R_5, L_L s + \frac{1}{C_L s}$	$\left(\frac{1}{3}\right)$		 	 	81
10.86INVALID-ORDER-86 $Z(s) = ($	$\infty$ , $\frac{1}{C_2s}$ , $\infty$ , $\infty$	$R_5, \frac{L_L s}{C_L L_L s^2 + 1}$	)		 	 	81
10.87INVALID-ORDER-87 $Z(s) = ($	$\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty$	$R_5, L_L s + R_L$	$+\frac{1}{C_L s}$ )		 	 	82
10.88INVALID-ORDER-88 $Z(s) = \left(\begin{array}{c} 1 & 1 \\ 1 & 1 \end{array}\right)$	$ \stackrel{?}{\sim} \infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty $	$R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{R_L}}$	$\left(\frac{1}{\overline{L}_L s}\right)$		 	 	82
10.89 INVALID-ORDER-89 $Z(s) = \Big($	$\infty$ , $\frac{1}{C_2s}$ , $\infty$ , $\infty$	$R_5, \frac{L_L s}{C_L L_L s^2 + 1}$	$+R_L$ )		 	 	82
10.90INVALID-ORDER-90 $Z(s) = \left(\begin{array}{c} 1 & 1 \\ 1 & 1 \end{array}\right)$	$ \stackrel{\cdot}{\sim} \infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty $	$, R_5, \frac{R_L \left(L_L s + \frac{1}{C}\right)}{L_L s + R_L + \frac{1}{C}}$	$\left(\frac{1}{C_L s}\right)$ $\left(\frac{1}{C_L s}\right)$		 	 	82

10.91INVALID-ORDER-91 $Z(s) = 0$	$\left(\infty,\ \frac{1}{C_2s},\ \infty,\ \infty,\ \frac{1}{C_5s},\ \frac{1}{C_Ls} ight)$	82
10.92INVALID-ORDER-92 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$	83
10.93INVALID-ORDER-93 $Z(s) = 0$	$\left(\infty,\; rac{1}{C_2s},\; \infty,\; \infty,\; rac{1}{C_5s},\; L_L s + rac{1}{C_L s} ight)\; \ldots \ldots$	83
10.94INVALID-ORDER-94 $Z(s) = 1$	$\left(\infty,\ rac{1}{C_2s},\ \infty,\ \infty,\ rac{1}{C_5s},\ rac{L_Ls}{C_LL_Ls^2+1} ight)$	83
10.95INVALID-ORDER-95 $Z(s) = 0$	$\left(\infty,\ rac{1}{C_2s},\ \infty,\ \infty,\ rac{1}{C_5s},\ L_Ls+R_L+rac{1}{C_Ls} ight)$	83
10.96INVALID-ORDER-96 $Z(s) =$	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	83
10.97INVALID-ORDER-97 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	83
10.98INVALID-ORDER-98 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \dots \dots$	84
10.99INVALID-ORDER-99 $Z(s) = 0$	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5}{C_5 R_5 s+1}, \ R_L + \frac{1}{C_L s}\right)$	84
10.10 <b>0</b> NVALID-ORDER-100 $Z(s) =$	$=\left(\infty,\;rac{1}{C_2s},\;\infty,\;\infty,\;rac{R_5}{C_5R_5s+1},\;L_Ls+rac{1}{C_Ls} ight)$	84
10.10 <b>I</b> NVALID-ORDER-101 $Z(s) =$	$=\left(\infty,\;rac{1}{C_2s},\;\infty,\;\infty,\;rac{R_5}{C_5R_5s+1},\;rac{L_Ls}{C_LL_Ls^2+1} ight)$	84
10.10 <b>2</b> NVALID-ORDER-102 $Z(s) =$	$=\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5}{C_5 R_5 s + 1}, \ L_L s + R_L + \frac{1}{C_L s}\right)$	84
10.10RNVALID-ORDER- $103 Z(s) =$	$=\left(\infty,\; rac{1}{C_2s},\; \infty,\; \infty,\; rac{R_5}{C_5R_5s+1},\; rac{1}{C_Ls+rac{1}{R_L}+rac{1}{L_Ls}} ight)\; \ldots \; \ldots$	85
10.104NVALID-ORDER-104 $Z(s) =$	$=\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	85
10.10 Invalid-Order-105 $Z(s) =$	$=\left(\infty,\; rac{1}{C_2 s},\; \infty,\; \infty,\; rac{R_5}{C_5 R_5 s+1},\; rac{R_L \left(L_L s+rac{1}{C_L s} ight)}{L_L s+R_L +rac{1}{C_L s}} ight)$	85
10.10 CNVALID-ORDER- $106 Z(s) =$	$=\left(\infty,\;rac{1}{C_2s},\;\infty,\;\infty,\;R_5+rac{1}{C_5s},\;rac{1}{C_Ls} ight)\;\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$	85
10.10TNVALID-ORDER- $107 Z(s) =$	$=\left(\infty,\ \frac{1}{C_2s},\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ \frac{R_L}{C_LR_Ls+1} ight)$	85
10.10&NVALID-ORDER-108 $Z(s) =$	$=\left(\infty,\;rac{1}{C_2s},\;\infty,\;\infty,\;R_5+rac{1}{C_5s},\;R_L+rac{1}{C_Ls} ight)$	86
10.10 <b>9</b> NVALID-ORDER-109 $Z(s) =$	$=\left(\infty,\ \frac{1}{C_2s},\ \infty,\ \infty,\ R_5+\frac{1}{C_5s},\ L_Ls+\frac{1}{C_Ls} ight)\ \ \ldots \ \ \ldots \ \ \ \ \ \ \ \ \ \ \ \ \ \$	86
10.11 <b>0</b> NVALID-ORDER-110 $Z(s) =$	$=\left(\infty,\ \frac{1}{C_{2}s},\ \infty,\ \infty,\ R_{5}+\frac{1}{C_{5}s},\ \frac{L_{L}s}{C_{L}L_{L}s^{2}+1}\right)$	86
10.11 <b>I</b> NVALID-ORDER-111 $Z(s) =$	$=\left(\infty, \ \frac{1}{C_{2}s}, \ \infty, \ \infty, \ R_{5} + \frac{1}{C_{5}s}, \ L_{L}s + R_{L} + \frac{1}{C_{L}s}\right) \ \dots \ $	86
10.11 <b>2</b> NVALID-ORDER-112 $Z(s) =$	$=\left(\infty, \ \frac{1}{C_2s}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$	86

10.11 <b>3</b> NVALID-ORDER-113 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$, \infty, \infty$	$R_5 + \frac{1}{C_5 s}$	$\frac{L_L s}{C_L L_L s^2 + 1}$ +	$-R_L$	 	 	 	 	8	;7
10.114NVALID-ORDER-114 $Z(s) = 1$	$\left(\infty, \frac{1}{C_2 s}\right)$	$\frac{1}{5}$ , $\infty$ , $\infty$	$R_5 + \frac{1}{C_5 s}$	$\frac{R_L \left(L_L s + \frac{1}{C_L}\right)}{L_L s + R_L + \frac{1}{C_L}}$	$\left(\frac{\overline{s}}{\frac{1}{L^s}}\right)$ .	 	 	 	 	8	37
10.11 <b>5</b> NVALID-ORDER-115 $Z(s) = 0$	,			`		 	 	 	 	8	37
10.11 <b>6</b> NVALID-ORDER-116 $Z(s) = 0$	$(\infty, \frac{1}{C_2 s})$	$, \infty, \infty$	$L_{5}s + \frac{1}{C_{5}s}$	$, \frac{1}{C_L s}$ $\cdot$ $\cdot$		 	 	 	 	8	37
10.11 <b>T</b> NVALID-ORDER-117 $Z(s) = 0$	$(\infty, \frac{1}{C_2 s})$	$, \infty, \infty$	$, L_5 s + \frac{1}{C_5 s}$	$, \frac{R_L}{C_L R_L s + 1}$		 	 	 	 	8	57
10.11&NVALID-ORDER-118 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$, \infty, \infty$	$, L_5 s + \frac{1}{C_5 s}$	$R_L + \frac{1}{C_L s}$		 	 	 	 	8	8
10.11 <b>9</b> NVALID-ORDER-119 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$\infty$ , $\infty$ , $\infty$	$, L_5 s + \frac{1}{C_5 s}$	$, L_L s + \frac{1}{C_L s}$	)	 	 	 	 	8	8
10.12 <b>0</b> NVALID-ORDER-120 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$\infty$ , $\infty$ , $\infty$	$, L_5 s + \frac{1}{C_5 s}$	$, \frac{L_L s}{C_L L_L s^2 + 1}$		 	 	 	 	8	8
10.12 <b>I</b> NVALID-ORDER-121 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$, \infty, \infty$	$, L_5 s + \frac{1}{C_5 s}$	, $L_L s + R_L$	$+\frac{1}{C_L s}$	 	 	 	 	8	8
10.12 <b>2</b> NVALID-ORDER-122 $Z(s) = 1$	$\left(\infty, \frac{1}{C_2 s}\right)$	$\frac{1}{3}$ , $\infty$ , $\infty$	$L_5s + \frac{1}{C_5s}$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{R_L}}$	$\left(\frac{1}{L_L s}\right)$ .	 	 	 	 	8	8
10.12 <b>B</b> NVALID-ORDER-123 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$, \infty, \infty$	$, L_5 s + \frac{1}{C_5 s}$	$, \frac{L_L s}{C_L L_L s^2 + 1} -$	$+R_L$	 	 	 	 	8	;9
10.124NVALID-ORDER-124 $Z(s) = 1$	$\left(\infty, \frac{1}{C_2 s}\right)$	$\frac{1}{5}$ , $\infty$ , $\infty$	$L_5s + \frac{1}{C_5s}$	$\frac{R_L \left(L_L s + \frac{C}{C}\right)}{L_L s + R_L + \frac{C}{C}}$	$\left(\frac{\frac{1}{L^s}}{\frac{1}{C_{L^s}}}\right)$	 	 	 	 	8	39
10.125NVALID-ORDER- $125 Z(s) = 0$	,			`		 	 	 	 	8	39
10.126NVALID-ORDER-126 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$, \infty, \infty$	$, \frac{L_5 s}{C_5 L_5 s^2 + 1},$	$\frac{1}{C_L s}$ )		 	 	 	 	8	59
10.12 <b>T</b> NVALID-ORDER-127 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$, \infty, \infty$	$, \frac{L_5 s}{C_5 L_5 s^2 + 1},$	$\frac{R_L}{C_L R_L s + 1}$		 	 	 	 	8	59
10.12\nstructure{8}\normalfont{VALID-ORDER-128} $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$, \infty, \infty$	$, \frac{L_5 s}{C_5 L_5 s^2 + 1},$	$R_L + \frac{1}{C_L s}$		 	 	 	 	9	0
10.12 <b>9</b> NVALID-ORDER-129 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$, \infty, \infty$	$, \frac{L_5 s}{C_5 L_5 s^2 + 1},$	$L_L s + \frac{1}{C_L s}$		 	 	 	 	9	10
10.13 <b>0</b> NVALID-ORDER-130 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$\infty$ , $\infty$ , $\infty$	$, \frac{L_5 s}{C_5 L_5 s^2 + 1},$	$\frac{L_L s}{C_L L_L s^2 + 1}$		 	 	 	 	9	0
10.13 <b>I</b> NVALID-ORDER-131 $Z(s) = 0$	$\left(\infty, \frac{1}{C_2 s}\right)$	$, \infty, \infty$	$, \frac{L_5 s}{C_5 L_5 s^2 + 1},$	$L_L s + R_L +$	$-\frac{1}{C_L s}$	 	 	 	 	9	0
10.132NVALID-ORDER-132 $Z(s) = 1$	$\left(\infty, \frac{1}{C_2 s}\right)$	$\frac{1}{5}$ , $\infty$ , $\infty$	$\frac{L_5 s}{C_5 L_5 s^2 + 1}$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_I}}$	$\left(\frac{1}{L^s}\right)$ .	 	 	 	 	9	0
10.13 <b>B</b> NVALID-ORDER-133 $Z(s) = 0$	$(\infty, \frac{1}{C_2 s})$	$, \infty, \infty$	$, \frac{L_5 s}{C_5 L_5 s^2 + 1},$	$\frac{L_L s}{C_L L_L s^2 + 1} +$	$R_L$	 	 	 	 	9	1
10.134NVALID-ORDER-134 $Z(s) = 1$	$\left(\infty, \frac{1}{C_2 s}\right)$	$\frac{1}{3}$ , $\infty$ , $\infty$	$, \frac{L_5 s}{C_5 L_5 s^2 + 1},$	$\frac{R_L \left(L_L s + \frac{1}{C_L}\right)}{L_L s + R_L + \frac{1}{C_L}}$	$\left(\frac{\overline{s}}{L^s}\right)$ .	 	 	 	 	9	1

10.13 <b>Б</b> NVALID-ORDER-135 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right.$	$L_5s + R_5 + \frac{1}{C_5s}, R_L$ )	91
10.136NVALID-ORDER-136 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right)$	$L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls}$	91
10.13 <b>T</b> NVALID-ORDER-137 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right)$	$L_5s + R_5 + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}$	91
10.13\&NVALID-ORDER-138 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right.$	$L_5 s + R_5 + \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}$	92
10.13 <b>9</b> NVALID-ORDER-139 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right.$	$L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}$	92
10.14 <b>0</b> NVALID-ORDER-140 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right.$	$L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}$	92
10.14INVALID-ORDER-141 $Z(s) = \displaystyle$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right.$	$L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}$	92
10.142NVALID-ORDER-142 $Z(s) =$	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \right)$	$L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}$	92
10.14 <b>B</b> NVALID-ORDER-143 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right.$	$L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L$	93
10.14\mathbb{1}\mathbb{N}\mathbb{V}\mathbb{A}\mathbb{L}\mathbb{I}\mathbb{O}\mathbb{R}\mathbb{D}\mathbb{E}\mathbb{R}-144~Z(s) =	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \right.$	$L_5s + R_5 + \frac{1}{C_5s}, \frac{R_L(L_Ls + \frac{1}{C_Ls})}{L_Ls + R_L + \frac{1}{C_Ls}}$	93
10.14 $5$ NVALID-ORDER-145 $Z(s)=$	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \right)$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L$	93
10.146NVALID-ORDER-146 $Z(s) =$	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \right.$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}$	93
10.14 INVALID-ORDER-147 $Z(s) =$	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \right)$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}$	93
10.14\bigselentrian NVALID-ORDER-148 $Z(s) =$	`		94
10.14 <b>9</b> NVALID-ORDER-149 $Z(s) =$	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \right)$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ L_L s + \frac{1}{C_L s}$	94
10.15 <b>0</b> NVALID-ORDER-150 $Z(s) =$	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \right)$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}$	94
10.15INVALID-ORDER-151 $Z(s) =$	$\left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \right)$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}$	94
10.15 <b>2</b> NVALID-ORDER-152 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right)$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}$	94
10.15 <b>B</b> NVALID-ORDER-153 $Z(s) =$	\		95
10.154NVALID-ORDER-154 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}, \infty, \infty, \right.$	$\frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$	95

10.15 Б NVALID-ORDER-155 $Z(s)=\left(\right.$	$\left(\infty,\ _{\overline{c}}\right)$	$\frac{1}{C_2 s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} +$	$R_5$ ,	$R_L\Big)$			 	 	 	 	 	 95
10.156NVALID-ORDER-156 $Z(s) = ($	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{C_2 s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} +$	$R_5$	$\frac{1}{C_L s}$			 	 	 	 	 	 95
10.15 <b>T</b> NVALID-ORDER-157 $Z(s) = ($	$(\infty, \overline{c})$	$\frac{1}{C_2s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} +$	$R_5$	$\frac{R_L}{C_L R_L s}$	$\overline{+1}$		 	 	 	 	 	 95
10.15&NVALID-ORDER-158 $Z(s) = ($	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{C_2 s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} +$	$R_5$ ,	$R_L + \frac{1}{6}$	$\frac{1}{C_L s}$		 	 	 	 	 	 96
10.15 <b>9</b> NVALID-ORDER-159 $Z(s) = ($	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{C_2 s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5s}{C_5L_5s^2+1}$ +	$R_5$ ,	$L_L s +$	$\frac{1}{C_L s}$		 	 	 	 	 	 96
10.16 <b>0</b> NVALID-ORDER-160 $Z(s) = ($	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{Z_2s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} +$	$R_5$	$\frac{L_L s}{C_L L_L s^2}$	$\overline{2+1}$		 	 	 	 	 	 96
10.16INVALID-ORDER-161 $Z(s) = ($	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{C_2s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} +$	$R_5$ ,	$L_L s +$	$R_L$ +	$\left(\frac{1}{C_L s}\right)$	 	 	 	 	 	 96
10.16 <b>2</b> NVALID-ORDER-162 $Z(s) = ($	$\left(\infty,\ _{\overline{c}}\right)$	$\frac{1}{C_2s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} +$	$-R_5$ ,	$\overline{C_L s + \overline{f_R}}$	$\frac{1}{R_L} + \frac{1}{L_L}$	$\left(\frac{1}{s}\right)$	 	 	 	 	 	 96
10.16 NVALID-ORDER-163 $Z(s) = ($	$\left(\infty, \ _{\overline{c}}\right)$	$\frac{1}{C_{2}s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5s}{C_5L_5s^2+1}$ +	$R_5$ ,	$\frac{L_L s}{C_L L_L s^2}$	$\frac{1}{2+1}$ +	$R_L$	 	 	 	 	 	 97
10.164NVALID-ORDER-164 $Z(s) = 1$	$\left(\infty,\ _{\overline{c}}\right)$	$\frac{1}{C_2 s}$ , $\infty$ ,	$\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} +$	$-R_5$ ,	$\frac{R_L \left(L_L + H\right)}{L_L s + H}$	$3 + \frac{1}{C_L}$	$\left(\frac{\overline{s}}{\overline{s}}\right)$	 	 	 	 	 	 97
10.16 \$NVALID-ORDER-165 $Z(s)=\left( \right.$	$(\infty, \overline{\alpha})$	$\frac{1}{C_2s}$ , $\infty$ ,	$\infty$ ,	$\frac{R_5 \left(L_5 s + \frac{1}{C_5} s $	$\frac{\overline{s}}{\overline{s}^{s}}$ , $R$	$\mathcal{L}_L$ .			 	 	 	 	 	 97
10.16 CNVALID-ORDER-166 $Z(s) = 1$	\			U	, .	/								
10.16 <b>T</b> NVALID-ORDER-167 $Z(s) = 1$	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{C_2s}$ , $\infty$ ,	$\infty$ ,	$\frac{R_5 \left(L_5 s + \frac{1}{C_5} + \frac{1}{C_5}\right)}{L_5 s + R_5 + \frac{1}{C_5}}$	$\frac{\overline{s}}{\overline{s}s}$ , $\overline{C}$	$\frac{R_L}{LR_Ls+1}$	$\overline{1}$ ).		 	 	 	 	 	 97
10.16&NVALID-ORDER-168 $Z(s) = 1$	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{C_2s}$ , $\infty$ ,	$\infty$ ,	$\frac{R_5 \left(L_5 s + \frac{1}{C_5} + \frac{1}{C_5} + \frac{1}{C_5}\right)}{L_5 s + R_5 + \frac{1}{C_5}}$	$\frac{\bar{s}}{\bar{s}^{s}}$ , $R$	$C_L + \frac{1}{C_L}$	$\left(\frac{1}{L^{S}}\right)$		 	 	 	 	 	 98
10.16 <b>9</b> NVALID-ORDER-169 $Z(s) = 0$	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{C_2s}$ , $\infty$ ,	$\infty$ ,	$\frac{R_5 \left(L_5 s + \frac{1}{C_5 s} $	$\frac{\overline{s}}{\overline{s}^{s}}$ , $L$	$Ls + \overline{c}$	$\left(\frac{1}{C_L s}\right)$		 	 	 	 	 	 98
10.17 <b>0</b> NVALID-ORDER-170 $Z(s) = 1$	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{C_2s}$ , $\infty$ ,	$\infty$ ,	$\frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}$	$\frac{\overline{s}}{\overline{s}^s}$ , $\overline{C}$	$\frac{L_L s}{L_L L_L s^2 + }$	$\overline{-1}$		 	 	 	 	 	 98
10.17INVALID-ORDER-171 $Z(s)=\left(\rule{0mm}{1.5mm}\right.$	\			0.5	, .			/	 	 	 	 	 	 98
10.17 <b>2</b> NVALID-ORDER-172 $Z(s) = 1$	\					_	_ /	/	 	 	 	 	 	 98
10.17 <b>B</b> NVALID-ORDER-173 $Z(s)=\left(\begin{array}{cccc} & & & \\ & & & \\ & & & \end{array}\right)$	$\left(\infty, \ \overline{c}\right)$	$\frac{1}{C_2s},  \infty,$	$\infty$ ,	$\frac{R_5 \left(L_5 s + \frac{1}{C_5} + \frac{1}{C_5} + \frac{1}{C_5}\right)}{L_5 s + R_5 + \frac{1}{C_5}}$	$\frac{\overline{s}}{\overline{s}s}$ , $\overline{C}$	$\frac{L_L s}{L_L L_L s^2 + }$	$\frac{1}{-1} + F$	$R_L$	 	 	 	 	 	 99

10.174NVALID-ORDER-174 $Z(s) =$	$\left(\infty, \frac{1}{C_2 s}\right)$	$\frac{1}{5}$ , $\infty$ , $\infty$ ,	$\frac{R_5 \left(L_5}{L_5 s + L_5}\right)$	$\frac{(s+\frac{1}{C_5s})}{R_5+\frac{1}{C_5s}},$	$\frac{R_L \left(L_L s + R \right)}{L_L s + R}$	$\frac{s + \frac{1}{C_L s}}{L + \frac{1}{C_L s}}$	) .	 	 	 	 	9	)9
10.17 INVALID-ORDER-175 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $F$	$R_5, R_L$				 	 	 	 	9	)9
10.176NVALID-ORDER-176 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $F$	$R_5, L_L s$	$+\frac{1}{C_L s}$			 	 	 	 	9	)9
10.17 <b>T</b> NVALID-ORDER-177 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $F$	$R_5, \frac{L}{C_L L_1}$	$\left(\frac{Ls}{Ls^2+1}\right)$			 	 	 	 	9	)9
10.17 NVALID-ORDER-178 $Z(s) =$	$\left(\infty, \frac{1}{C_2 F}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $F$	$R_5, L_L s$	$+R_L +$	$\frac{1}{C_L s}$		 	 	 	 	10	)()
10.17 <b>9</b> NVALID-ORDER-179 $Z(s) =$	$\left(\infty, \ _{\overline{C_2I}}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $I$	$R_5, \ {C_L s}$	$\frac{1}{+\frac{1}{R_L}+\frac{1}{L_L}}$	$\left(\frac{1}{2}\right)$ .		 	 	 	 	10	)()
10.18 ONVALID-ORDER- $180 Z(s) =$	$(\infty, \frac{1}{C_2 R})$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $F$	$R_5, \frac{L}{C_L L_L}$	$\frac{Ls}{Ls^2+1} + \frac{Ls}{Ls^2+1}$	$R_L$		 	 	 	 	10	)()
10.18INVALID-ORDER-181 $Z(s) =$	$\left(\infty, \ _{\overline{C_2I}}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $I$	$R_5, \frac{R_L(1)}{L_L s}$	$\frac{L_L s + \frac{1}{C_L s}}{+R_L + \frac{1}{C_L s}}$	$\frac{1}{\overline{s}}$ .		 	 	 	 	10	)()
10.18 <b>2</b> NVALID-ORDER-182 $Z(s) =$	$(\infty, \frac{1}{C_2 R})$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{1}{C_5 s}, \frac{1}{C_L s}$	$\left( \cdot \right)$			 	 	 	 	10	)()
10.18 <b>3</b> NVALID-ORDER-183 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{1}{C_5 s}$ , $R_L$	$+\frac{1}{C_L s}$			 	 	 	 	10	)1
10.18#NVALID-ORDER-184 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{1}{C_5 s}$ , $L_L s$	$s + \frac{1}{C_L s}$			 	 	 	 	10	)1
10.18 Invalid-order-185 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{1}{C_5 s},  \frac{1}{C_L I}$	$L_L s$ $L_L s^2 + 1$			 	 	 	 	10	)1
10.18 CNVALID-ORDER-186 $Z(s) =$	$\left(\infty, \frac{1}{C_2 F}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{1}{C_5 s}$ , $L_L s$	$s + R_L +$	$-\frac{1}{C_L s}$		 	 	 	 	10	)1
10.18 <b>T</b> NVALID-ORDER-187 $Z(s) =$	$\left(\infty, \ _{\overline{C_2I}}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{1}{C_5 s}$ , $\frac{1}{C_L s}$	$\frac{1}{s + \frac{1}{R_L} + \frac{1}{L_I}}$	$\left(\frac{1}{2}\right)$ .		 	 	 	 	10	)1
10.18\( \) NVALID-ORDER-188 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{1}{C_5 s},  \frac{1}{C_L I}$	$\frac{L_L s}{L_L s^2 + 1} +$	$R_L$		 	 	 	 	10	)1
10.18 <b>9</b> NVALID-ORDER-189 $Z(s) =$	$\left(\infty, \ _{\overline{C_2I}}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\bar{c}$	$\frac{1}{C_{5s}}, \frac{R_L}{L_L}$	$\frac{\left(L_L s + \frac{1}{C_L}\right)}{s + R_L + \frac{1}{C_I}}$	$\left(\frac{\overline{s}}{\overline{s}}\right)$		 	 	 	 	10	)2
10.19 <b>©</b> NVALID-ORDER-190 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{R_5}{C_5R_5s+1},$	$R_L + \overline{\epsilon}$	$\left(\frac{1}{C_L s}\right)$		 	 	 	 	10	)2
10.19 <b>I</b> NVALID-ORDER-191 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{R_5}{C_5R_5s+1},$	$L_L s +$	$\frac{1}{C_L s}$		 	 	 	 	10	)2
10.19 <b>2</b> NVALID-ORDER-192 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{R_5}{C_5R_5s+1},$	$\frac{L_L s}{C_L L_L s^2}$	${+1}$		 	 	 	 	10	)2
10.19 <b>2</b> NVALID-ORDER-193 $Z(s) =$	$\left(\infty, \frac{1}{C_2 F}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{R_5}{C_5R_5s+1},$	$L_L s + 1$	$R_L + \overline{c}$	$\left(\frac{1}{C_L s}\right)$	 	 	 	 	10	)2
10.194NVALID-ORDER-194 $Z(s) =$	$\left(\infty, \ _{\overline{C_2I}}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\bar{c}$	$\frac{R_5}{C_5R_5s+1},$	$\frac{1}{C_L s + \frac{1}{R}}$	$\frac{1}{L} + \frac{1}{L_L s}$		 	 	 	 	10	)3
10.19 INVALID-ORDER-195 $Z(s) =$	$\left(\infty, \frac{1}{C_2 R}\right)$	$\frac{R_2}{R_2s+1}$ , $\infty$ ,	$\infty$ , $\overline{c}$	$\frac{R_5}{C_5R_5s+1},$	$\frac{L_L s}{C_L L_L s^2}$	$\frac{1}{+1} + R$	2L	 	 	 	 	10	)3

10.196NVALID-ORDER-196 $Z(s) =$	$\left(\infty,\right.$	$\frac{R_2}{C_2R_2s+1},$	$\infty$ , $\propto$	$, \frac{R}{C_5 R}$	$\frac{R_5}{5s+1}$ ,	$\frac{R_L \left(L_L s - L_L s + R_L\right)}{L_L s + R_L}$	$\left(\frac{+\frac{1}{C_L s}}{+\frac{1}{C_L s}}\right)$		 	 	 	 	 	103
10.19TNVALID-ORDER-197 $Z(s) =$	,					`			 	 	 	 	 	103
10.19 NVALID-ORDER-198 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$, R_5 +$	$-\frac{1}{C_5 s}$ ,	$\frac{R_L}{C_L R_L s +}$	$\overline{-1}$ ) .		 	 	 	 	 	103
10.19 <b>9</b> NVALID-ORDER-199 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$, R_5 +$	$-\frac{1}{C_5 s}$ ,	$R_L + \overline{c}$	$\left(\frac{1}{C_L s}\right)$ .		 	 	 	 	 	104
10.20 ONVALID-ORDER-200 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$, R_5 +$	$-\frac{1}{C_5 s}$ ,	$L_L s + \frac{1}{2}$	$\frac{1}{C_L s}$		 	 	 	 	 	104
10.20 <b>I</b> NVALID-ORDER-201 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$, R_5 +$	$-\frac{1}{C_5 s}$ ,	$\frac{L_L s}{C_L L_L s^2}$	$\overline{+1}$ ) .		 	 	 	 	 	104
10.20 <b>2</b> NVALID-ORDER-202 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$, R_5 +$	$-\frac{1}{C_5 s}$ ,	$L_L s + 1$	$R_L + \overline{c}$	$\left(\frac{1}{L_s}\right)$	 	 	 	 	 	104
10.20 <b>B</b> NVALID-ORDER-203 $Z(s) =$	$\left(\infty,\right.$	$\frac{R_2}{C_2R_2s+1},$	$\infty$ , $\propto$	$R_5$ -	$+\frac{1}{C_5s}$ ,	$\frac{1}{C_L s + \frac{1}{R_L}}$	$\frac{1}{L} + \frac{1}{L_L s}$	) .	 	 	 	 	 	104
10.204NVALID-ORDER-204 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$, R_5 +$	$-\frac{1}{C_5 s}$ ,	$\frac{L_L s}{C_L L_L s^2}$	$\frac{1}{1} + R$	L) .	 	 	 	 	 	105
10.20 <b>5</b> NVALID-ORDER-205 $Z(s) =$	$\left(\infty,\right.$	$\frac{R_2}{C_2R_2s+1},$	$\infty$ , $\propto$	$R_5$ -	$+\frac{1}{C_5s}$ ,	$\frac{R_L \left(L_L s + R \right)}{L_L s + R}$	$\frac{s + \frac{1}{C_L s}}{L + \frac{1}{C_L s}}$	$\Big)$ .	 	 	 	 	 	105
10.20 CNVALID-ORDER- $206 Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$L_5s$	$+\frac{1}{C_5s}$	$, R_L$			 	 	 	 	 	105
10.20TNVALID-ORDER-207 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$L_5s$	$+\frac{1}{C_5s}$	$, \frac{1}{C_L s}$			 	 	 	 	 	105
10.20\ntext{NVALID-ORDER-208} $Z(s) =$	$(\infty,$	$\frac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$L_5s$	$+\frac{1}{C_5s}$	$, \frac{R_L}{C_L R_L s}$	$\overline{+1}$ ) .		 	 	 	 	 	105
10.209NVALID-ORDER-209 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$L_5s$	$+\frac{1}{C_5s}$	$R_L + \frac{1}{2}$	$\frac{1}{C_L s}$		 	 	 	 	 	106
10.21 ONVALID-ORDER-210 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$L_5s$	$+\frac{1}{C_5s}$	$, L_L s +$	$\frac{1}{C_L s}$		 	 	 	 	 	106
10.21 <b>I</b> NVALID-ORDER-211 $Z(s) =$	$\left(\infty,\right.$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$L_5s$	$+\frac{1}{C_5s}$	$, \frac{L_L s}{C_L L_L s}$	$\left(\frac{3}{2+1}\right)$		 	 	 	 	 	106
10.21 <b>2</b> NVALID-ORDER-212 $Z(s) =$	$\left(\infty,\right.$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$L_5s$	$+\frac{1}{C_5s}$	$, L_L s +$	$R_L + \epsilon$	$\left(\frac{1}{C_L s}\right)$	 	 	 	 	 	106
10.21 <b>B</b> NVALID-ORDER-213 $Z(s) =$	$\left(\infty,\right.$	$\frac{R_2}{C_2R_2s+1},$	$\infty$ , $\propto$	$L_5s$	$+\frac{1}{C_5s}$	$, \overline{C_L s + \overline{I}}$	$\frac{1}{R_L} + \frac{1}{L_L s}$	$\cdot$ ) .	 	 	 	 	 	106
10.214NVALID-ORDER-214 $Z(s) =$	$(\infty,$	$\tfrac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$L_5s$	$+\frac{1}{C_5s}$	$,  \frac{L_L s}{C_L L_L s}$	$\frac{3}{2+1} + I$	$R_L$	 	 	 	 	 	107
10.21 Invalid-order-215 $Z(s) =$	$\left(\infty,\right.$	$\frac{R_2}{C_2R_2s+1},$	$\infty$ , $\propto$	$L_5s$	$+\frac{1}{C_5s}$	$, \frac{R_L \left(L_L + \frac{L_L}{L_L}\right)}{L_L s + \frac{L_L}{L_L}}$	$\frac{(s + \frac{1}{C_L s})}{R_L + \frac{1}{C_L s}}$	$\frac{1}{2}$ .	 	 	 	 	 	107
10.216NVALID-ORDER-216 $Z(s) =$	/					\			 	 	 	 	 	107
10.21TNVALID-ORDER-217 $Z(s) =$	$(\infty,$	$\frac{R_2}{C_2R_2s+1},$	$\infty$ , $\infty$	$, \frac{L_1}{C_5L_5}$	$\frac{5s}{s^2+1}$ ,	$\frac{1}{C_L s}$			 	 	 	 	 	107

10.23 <b>9</b> NVALID-ORDER-239 $Z(s) = \left(\frac{1}{2}\right)^{n}$	$\left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ R_L + \frac{1}{C_L s}\right) \ \dots $	112
10.24 <b>0</b> NVALID-ORDER-240 $Z(s) = \left(\frac{1}{2}\right)$	$\left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ L_L s + \frac{1}{C_L s}\right)  \dots $	112
10.24INVALID-ORDER-241 $Z(s) = ($	$\left(\infty, \ \frac{R_2}{C_2 R_2 s+1}, \ \infty, \ \infty, \ \frac{1}{C_5 s+\frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots $	112
10.24 <b>2</b> NVALID-ORDER-242 $Z(s) = \left(\frac{1}{2}\right)$	$\left(\infty, \ \frac{R_2}{C_2 R_2 s+1}, \ \infty, \ \infty, \ \frac{1}{C_5 s+\frac{1}{R_5}+\frac{1}{L_5 s}}, \ L_L s+R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	112
10.24 <b>3</b> NVALID-ORDER-243 $Z(s) = \left(\frac{1}{2}\right)^{n}$	$\left(\infty, \ \frac{R_2}{C_2 R_2 s+1}, \ \infty, \ \infty, \ \frac{1}{C_5 s+\frac{1}{R_5}+\frac{1}{L_5 s}}, \ \frac{1}{C_L s+\frac{1}{R_L}+\frac{1}{L_L s}}\right) \ \dots $	112
10.24\Pinvalid-Order-244 $Z(s) = \left( \right)$	$\left(\infty, \ \frac{R_2}{C_2 R_2 s+1}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots $	113
10.24 <b>5</b> NVALID-ORDER-245 $Z(s) = ($	$\left(\infty, \frac{R_2}{C_2 R_2 s+1}, \infty, \infty, \frac{1}{C_5 s+\frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L + \frac{1}{C_L s}}\right) - \dots \right)$	113
	$\left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, R_L\right) \dots \dots$	113
10.24 NVALID-ORDER-247 $Z(s) = ($	$(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{1}{C_Ls})$	113
10.24\( \) NVALID-ORDER-248 $Z(s) = \left( \left( \left( \left( \left( s - 248 \right) \right) \right) \right) + \left( \left( \left( \left( \left( \left( \left( \left( s - 248 \right) \right) \right) \right) \right) \right) \right) + \left( $	$\left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{R_L}{C_LR_Ls+1}\right)$	113
10.249NVALID-ORDER-249 $Z(s) = ($	$\left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, R_L + \frac{1}{C_Ls}\right) \dots \dots$	114
10.25 <b>0</b> NVALID-ORDER-250 $Z(s) = \left(\begin{array}{c} 1 & 1 \\ 1 & 1 \end{array}\right)$	$\left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + \frac{1}{C_Ls}\right)$	114
10.25INVALID-ORDER-251 $Z(s) = ($	$\left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_LL_Ls^2+1}\right)'$	114
10.25 <b>2</b> NVALID-ORDER-252 $Z(s) = \left(\begin{array}{c} 1 & 1 \\ 1 & 1 \end{array}\right)$	$(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, L_Ls + R_L + \frac{1}{C_Ls})$	114
10.25 <b>B</b> NVALID-ORDER-253 $Z(s) = \left(\frac{1}{2}\right)$		114
10.25 <b>4</b> NVALID-ORDER-254 $Z(s) = ($	$\left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right) \dots \dots$	115
10.25 <b>5</b> NVALID-ORDER-255 $Z(s) = \left(\frac{1}{2}\right)$	$\left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1} + R_5, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \dots \dots$	115
10.25 <b>6</b> NVALID-ORDER-256 $Z(s) = \left(\frac{1}{2}\right)$	$\left(\infty, \ \frac{R_2}{C_2R_2s+1}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, \ R_L\right)$	115
10.25 <b>T</b> NVALID-ORDER-257 $Z(s) = \left(\frac{1}{2}\right)$	$\left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, \frac{1}{C_Ls}\right)$	115
10.25 NVALID-ORDER-258 $Z(s) = ($	$\left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, \frac{R_L}{C_LR_Ls+1}\right)$	115

	$\left(\infty, \frac{R_2}{C_2 R_2 s+1}, \infty, \infty, \frac{R_5 \left(L_5 s+\frac{1}{C_5 s}\right)}{L_5 s+R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.26 <b>0</b> NVALID-ORDER-260 $Z(s) =$	$\left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s}\right) \dots \dots$
10.26INVALID-ORDER-261 $Z(s) =$	$\left(\infty, \frac{R_2}{C_2 R_2 s+1}, \infty, \infty, \frac{R_5 \left(L_5 s+\frac{1}{C_5 s}\right)}{L_5 s+R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 +1}\right) \dots \dots$
	$\left(\infty, \frac{R_2}{C_2 R_2 s+1}, \infty, \infty, \frac{R_5 \left(L_5 s+\frac{1}{C_5 s}\right)}{L_5 s+R_5 + \frac{1}{C_5 s}}, L_L s+R_L + \frac{1}{C_L s}\right) \dots \dots$
10.26\mathbb{B}\mathbb{N}\mathbb{A}\mathbb{L}\mathbb{I}\mathbb{D}\mathbb{C}\mathbb{R}\mathbb{D}\mathbb{E}\mathbb{R}-263 \ Z(s) =	$\left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \right) \dots $
10.264NVALID-ORDER-264 $Z(s) =$	$\left(\infty, \frac{R_2}{C_2 R_2 s+1}, \infty, \infty, \frac{R_5 \left(L_5 s+\frac{1}{C_5 s}\right)}{L_5 s+R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 +1} + R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.26 $\mathbf{J}$ NVALID-ORDER-265 $Z(s)=$	$\left(\infty, \frac{R_2}{C_2 R_2 s+1}, \infty, \infty, \frac{R_5 \left(L_5 s+\frac{1}{C_5 s}\right)}{L_5 s+R_5 +\frac{1}{C_5 s}}, \frac{R_L \left(L_L s+\frac{1}{C_L s}\right)}{L_L s+R_L +\frac{1}{C_L s}}\right) \dots \dots$
10.26  (INVALID-ORDER-266  Z(s) =	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, R_L\right) \dots \dots$
10.26TNVALID-ORDER- $267$ $Z(s) =$	$(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, L_L s + \frac{1}{C_L s})$
10.26 NVALID-ORDER-268 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)'$
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$
10.270NVALID-ORDER-270 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$
10.27INVALID-ORDER-271 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)'$
10.27 <b>3</b> NVALID-ORDER-273 $Z(s) =$	$(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s})$
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$

10.27 <b>9</b> NVALID-ORDER-279 $Z(s) = 1$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{1}{C_5 s}$ , $\frac{1}{C_L s}$	$\frac{1}{+\frac{1}{R_L} + \frac{1}{L_L}}$	$\left(\frac{1}{2}\right)$ .		 	 	 	 	 	. 120
10.28 <b>0</b> NVALID-ORDER-280 $Z(s) = ($	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{1}{C_5 s},  \frac{L}{C_L L}$	$\frac{c_L s}{L s^2 + 1} + \frac{c_L s}{c_L s^2 + 1}$	$R_L$		 	 	 	 	 	. 120
10.28INVALID-ORDER-281 $Z(s) = 1$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{1}{C_5 s}, \frac{R_L \left(}{L_L s}\right)$	$\frac{L_L s + \frac{1}{C_L s}}{+R_L + \frac{1}{C_L s}}$	$\left(\frac{1}{2}\right)$ .		 	 	 	 	 	. 120
10.28 <b>2</b> NVALID-ORDER-282 $Z(s) = ($	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{R_5}{C_5R_5s+1},$	$\frac{1}{C_L s}$			 	 	 	 	 	. 120
10.28\mathbb{B}\mathbb{N}\mathbb{A}\mathbb{L}\mathbb{I}\mathbb{D}\mathrm{C}\mathrm{R}\mathrm{D}\mathrm{E}\mathrm{R}-283 \ Z(s) = (	$\Big(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ , c	$\infty$ ,	$\frac{R_5}{C_5R_5s+1},$	$\frac{R_L}{C_L R_L s + 1}$	$\bar{\mathfrak{l}}$ .		 	 	 	 	 	. 120
10.28#NVALID-ORDER-284 $Z(s) = ($	$\Big(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{R_5}{C_5R_5s+1},$	$R_L + \frac{1}{C_I}$	$\left(\frac{1}{\sqrt{s}}\right)$ .		 	 	 	 	 	. 121
10.28 INVALID-ORDER-285 $Z(s) = ($	$\Big(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{R_5}{C_5R_5s+1},$	$L_L s + \overline{c}$	$\left(\frac{1}{C_L s}\right)$		 	 	 	 	 	. 121
10.28 <b>6</b> NVALID-ORDER-286 $Z(s) = 0$	$\Big(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{R_5}{C_5R_5s+1},$	$\frac{L_L s}{C_L L_L s^2 +}$	$\overline{-1}$ ) .		 	 	 	 	 	. 121
10.28 <b>T</b> NVALID-ORDER-287 $Z(s) = 0$	$\left(\infty,\right)$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{R_5}{C_5R_5s+1},$	$L_L s + F$	$R_L + \frac{1}{C}$	$\left(\frac{1}{L^s}\right)$	 	 	 	 	 	. 121
10.28&NVALID-ORDER-288 $Z(s) = 1$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{R_5}{C_5R_5s+1},$	$\frac{1}{C_L s + \frac{1}{R_L}}$	$+\frac{1}{L_L s}$	) .	 	 	 	 	 	. 121
10.28¶NVALID-ORDER-289 $Z(s) = ($	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{R_5}{C_5R_5s+1},$	$\frac{L_L s}{C_L L_L s^2 +}$	-1 + R	$_L\Big)$ .	 	 	 	 	 	. 122
10.29©NVALID-ORDER-290 $Z(s) = ($	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$\frac{R_5}{C_5R_5s+1},$	$\frac{R_L \Big( L_L s - L_L s + R_L \Big)}{L_L s + R_L}$	$\left(\frac{+\frac{1}{C_L s}}{+\frac{1}{C_L s}}\right)$	) .	 	 	 	 	 	. 122
10.29INVALID-ORDER-291 $Z(s) = 0$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , i	$R_5 + \frac{1}{C_5 s},$	$\frac{1}{C_L s}$			 	 	 	 	 	. 122
10.29 <b>2</b> NVALID-ORDER-292 $Z(s) = ($	$\Big(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ , o	$\infty$ , I	$R_5 + \frac{1}{C_5 s},$	$\frac{R_L}{C_L R_L s}$	$\overline{-1}$ ) .		 	 	 	 	 	. 122
10.29\$NVALID-ORDER-293 $Z(s) = ($	$\Big(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ , o	$\infty$ , I	$R_5 + \frac{1}{C_5 s},$	$R_L + \overline{c}$	$\left(\frac{1}{C_L s}\right)$		 	 	 	 	 	. 122
10.29#NVALID-ORDER-294 $Z(s) = ($	$\Big(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , i	$R_5 + \frac{1}{C_5 s},$	$L_L s +$	$\frac{1}{C_L s}$		 	 	 	 	 	. 123
10.29 INVALID-ORDER-295 $Z(s) = ($	$\Big(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , i	$R_5 + \frac{1}{C_5 s},$	$\frac{L_L s}{C_L L_L s^2}$	$\overline{+1}$		 	 	 	 	 	. 123
10.29 <b>C</b> NVALID-ORDER-296 $Z(s) = ($	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , I	$R_5 + \frac{1}{C_5 s},$	$L_L s + 1$	$R_L + \overline{\epsilon}$	$\left(\frac{1}{C_L s}\right)$	 	 	 	 	 	. 123
10.29 <b>T</b> NVALID-ORDER-297 $Z(s) = 1$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$R_5 + \frac{1}{C_5 s}$	$,  \frac{1}{C_L s + \frac{1}{R}}$	$\frac{1}{L} + \frac{1}{L_L s}$	$\bigg)$ .	 	 	 	 	 	. 123
10.29\nablaNVALID-ORDER-298 $Z(s) = ($	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , I	$R_5 + \frac{1}{C_5 s},$	$\frac{L_L s}{C_L L_L s^2}$	$\frac{1}{1} + I$	$R_L$	 	 	 	 	 	. 123
10.29 <b>9</b> NVALID-ORDER-299 $Z(s) = 1$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ ,	$R_5 + \frac{1}{C_5 s}$	$, \frac{R_L \left(L_L s + \frac{1}{L_L s + R}\right)}{L_L s + R}$	$s + \frac{1}{C_L s} $ $L + \frac{1}{C_L s}$	-) .	 	 	 	 	 	. 124
10.30 <b>0</b> NVALID-ORDER-300 $Z(s) = ($	/					\			 	 	 	 	 	. 124

10.30INVALID-ORDER-301 $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-\frac{1}{C_5 s}$	$\frac{1}{C_L s}$			 	 	 	 	. 124
10.30 <b>2</b> NVALID-ORDER- $302$ $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-\frac{1}{C_5 s}$	$\frac{R_L}{C_L R_L s + 1}$	$_{\overline{1}}$ )		 	 	 	 	. 124
10.308NVALID-ORDER- $303$ $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-\frac{1}{C_5 s}$	$R_L + \frac{1}{C_L}$	$\left(\frac{1}{Ls}\right)$		 	 	 	 	. 124
10.30 INVALID-ORDER- $304$ $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-\frac{1}{C_5 s}$	$L_L s + \overline{c}$	$\left(\frac{1}{C_L s}\right)$ .		 	 	 	 	. 125
10.305NVALID-ORDER- $305$ $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-\frac{1}{C_5 s}$	$\frac{L_L s}{C_L L_L s^2 +}$	$\overline{-1}$ )		 	 	 	 	. 125
10.30 CONVALID-ORDER- $306$ $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-\frac{1}{C_5 s}$	$L_L s + P$	$R_L + \frac{1}{C_L}$	$\left( \frac{1}{s} \right)$ .	 	 	 	 	. 125
10.30 <b>T</b> NVALID-ORDER-307 $Z(s) =$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$	$+\frac{1}{C_5s}$	$\frac{1}{C_L s + \frac{1}{R_L}}$	$\left(\frac{1}{1+\frac{1}{L_L s}}\right)$		 	 	 	 	. 125
10.30 NVALID-ORDER-308 $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-\frac{1}{C_5 s}$ ,	$\frac{L_L s}{C_L L_L s^2} +$	$\frac{1}{1} + R_L$	,	 	 	 	 	. 125
10.30 <b>9</b> NVALID-ORDER-309 $Z(s) =$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$	$+\frac{1}{C_5s}$	$\frac{R_L \left(L_L s + L_L s + R_L \right)}{L_L s + R_L}$	$\left(\frac{+\frac{1}{C_L s}}{+\frac{1}{C_L s}}\right)$		 	 	 	 	. 126
10.31 ONVALID-ORDER- $310 Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$R_L$ )			 	 	 	 	. 126
10.31 INVALID-ORDER-311 $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$\frac{1}{C_L s}$ )			 	 	 	 	. 126
10.31 <b>2</b> NVALID-ORDER-312 $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$\frac{R_L}{C_L R_L s + 1}$	)		 	 	 	 	. 126
10.31 SNVALID-ORDER-313 $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$R_L + \frac{1}{C_L s}$	$\left(\frac{1}{8}\right)$		 	 	 	 	. 126
10.31 INVALID-ORDER-314 $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$L_L s + \frac{1}{C_L}$	$\left(\frac{1}{\sqrt{s}}\right)$		 	 	 	 	. 127
10.315NVALID-ORDER-315 $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$\frac{L_L s}{C_L L_L s^2 + 1}$	$\left[  ight] $		 	 	 	 	. 127
10.31 CNVALID-ORDER-316 $Z(s) =$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$L_L s + R_I$	$L + \frac{1}{C_L s}$	$\left( \cdot \right) \cdot \cdot$	 	 	 	 	. 127
10.31TNVALID-ORDER- $317 Z(s) =$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$\frac{1}{C_L s + \frac{1}{R_L}}$	$\frac{1}{L_L s}$		 	 	 	 	. 127
10.31 NVALID-ORDER-318 $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$\frac{L_L s}{C_L L_L s^2 + 1}$	$\left(1 + R_L\right)$		 	 	 	 	. 127
10.31 <b>9</b> NVALID-ORDER-319 $Z(s) =$	$\left(\infty,\right.$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $\frac{L_5}{C_5L_5s}$	$\frac{s}{s^2+1}$ ,	$R_L \left(L_L s + L_L s + R_L s $	$\left(\frac{\frac{1}{C_L s}}{\frac{1}{C_L s}}\right)$		 	 	 	 	. 128
10.32 ONVALID-ORDER- $320$ $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-R_5$ $+$	$-\frac{1}{C_5 s}$ , $R_I$	$\left( \cdot \right)  \dot{.}  .$		 	 	 	 	. 128
10.32INVALID-ORDER- $321$ $Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-R_5$ $+$	$-\frac{1}{C_5 s}, \frac{1}{C_L}$	$\left(\frac{1}{a^s}\right)$		 	 	 	 	. 128
10.32 <b>2</b> NVALID-ORDER- $322 Z(s) =$	$(\infty,$	$R_2 + \frac{1}{C_2 s},$	$\infty$ ,	$\infty$ , $L_5s$ +	$-R_5$ $+$	$-\frac{1}{C_5 s}, \ \overline{C_L}$	$\left(\frac{R_L}{R_L s+1}\right)$		 	 	 	 	. 128

10.32BNVALID-ORDER- $323$ $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right) \dots \dots$	. 128
10.324NVALID-ORDER- $324$ $Z(s) =$	$\left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)$	. 129
10.325NVALID-ORDER- $325$ $Z(s) =$	$(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1})$	. 129
10.326NVALID-ORDER- $326$ $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$	. 129
10.32TNVALID-ORDER- $327$ $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$	. 129
10.32NVALID-ORDER- $328$ $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	. 129
10.32 <b>9</b> NVALID-ORDER-329 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$	. 130
10.33©NVALID-ORDER-330 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$	. 130
10.33INVALID-ORDER-331 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$	. 130
10.33 <b>2</b> NVALID-ORDER-332 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$	. 130
10.33 <b>%</b> NVALID-ORDER-333 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$	. 130
10.334NVALID-ORDER-334 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right) \dots \dots$	. 131
10.33 NVALID-ORDER-335 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$	. 131
10.336NVALID-ORDER-336 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$	. 131
10.33 <b>T</b> NVALID-ORDER-337 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)\right) \dots \dots$	. 131
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$	. 131
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \dots \dots$	. 132
10.34 <b>0</b> NVALID-ORDER- $340$ $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$	. 132
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right) \dots \dots$	. 132
10.34 <b>2</b> NVALID-ORDER- $342$ $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right) \dots \dots$	. 132

10.34 <b>&amp;</b> NVALID-ORDER-343 $Z(s) =$	$\left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ R_L + \frac{1}{C_L s}\right)$
10.34\bulletNVALID-ORDER-344 $Z(s) =$	$\left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + \frac{1}{C_L s}\right) \ \dots \ $
10.345NVALID-ORDER-345 $Z(s) =$	$\left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$
10.34  CNVALID-ORDER-346  Z(s) =	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right)$
10.34 TNVALID-ORDER-347 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \dots \dots$
10.34&NVALID-ORDER-348 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$
10.34 <b>9</b> NVALID-ORDER-349 $Z(s) =$	$\left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \ \dots \ $
10.35 <b>0</b> NVALID-ORDER-350 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L\right) \dots \dots$
10.35INVALID-ORDER-351 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$
10.35 <b>2</b> NVALID-ORDER-352 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$
10.35 <b>2</b> NVALID-ORDER-353 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right) \dots \dots$
10.354NVALID-ORDER-354 $Z(s) =$	$\left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + \frac{1}{C_L s}\right)  \dots $
10.35 NVALID-ORDER-355 $Z(s) =$	$\left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.35 CNVALID-ORDER-356 $Z(s) =$	$\left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \dots \dots$
10.35\&NVALID-ORDER-358 $Z(s) =$	$\left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.35 <b>9</b> NVALID-ORDER-359 $Z(s) =$	$\left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)\right) \dots \dots$
10.36 <b>©</b> NVALID-ORDER-360 $Z(s) =$	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, R_5, \frac{1}{C_Ls}\right)$
10.36INVALID-ORDER-361 $Z(s) =$	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, R_5, \frac{R_L}{C_LR_Ls + 1}\right)$

10.36 <b>2</b> NVALID-ORDER-362 $Z(s) = 0$	$\Big(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$R_5$	$R_L + \frac{1}{C_L s}$		 	 	 	 	136
10.363NVALID-ORDER- $363$ $Z(s) = ($	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$R_5$	$L_L s + \frac{1}{C_L s}$		 	 	 	 	136
10.364NVALID-ORDER- $364 Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$R_5$	$\frac{L_L s}{C_L L_L s^2 + 1}$		 	 	 	 	137
10.36 Invalid-order- $365 Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$R_5$	$L_L s + R_L +$	$\frac{1}{C_L s}$	 	 	 	 	137
10.36 NVALID-ORDER-366 $Z(s) = 1$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$R_5$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L}}$	$\left(\frac{1}{s}\right)$ .	 	 	 	 	137
10.36 <b>T</b> NVALID-ORDER- $367$ $Z(s) = ($	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$R_5$	$\frac{L_L s}{C_L L_L s^2 + 1} +$	$R_L$	 	 	 	 	137
10.36\NVALID-ORDER-368 $Z(s) = 1$	$\left(\infty,\right)$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$R_5$	$\frac{R_L \left(L_L s + \frac{1}{C_L s} $	$\left(\frac{1}{s}\right)$ .	 	 	 	 	137
10.369NVALID-ORDER- $369$ $Z(s) = ($	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{1}{C_5 s}$	$R_L$		 	 	 	 	138
10.37 ONVALID-ORDER- $370 Z(s) = 0$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{1}{C_5 s}$	$\left(\frac{1}{C_L s}\right)$		 	 	 	 	138
10.37INVALID-ORDER-371 $Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{1}{C_5 s}$	$\left(\frac{R_L}{C_L R_L s + 1}\right)$		 	 	 	 	138
10.37 <b>2</b> NVALID-ORDER- $372 Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$\frac{1}{C_5 s}$	$R_L + \frac{1}{C_L s}$		 	 	 	 	138
10.37 <b>3</b> NVALID-ORDER-373 $Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{1}{C_5 s}$	$L_L s + \frac{1}{C_L s}$		 	 	 	 	138
10.374NVALID-ORDER- $374 Z(s) = ($	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{1}{C_5 s}$	$\left(\frac{L_L s}{C_L L_L s^2 + 1}\right)$		 	 	 	 	138
10.375NVALID-ORDER-375 $Z(s) = 1$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{1}{C_5 s}$	$L_L s + R_L +$	$-\frac{1}{C_L s}$	 	 	 	 	139
10.376NVALID-ORDER-376 $Z(s) = 1$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{1}{C_5 s}$	$, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L}}$	$\left(\frac{1}{L^s}\right)$ .	 	 	 	 	139
10.37 NVALID-ORDER- $377 Z(s) = 10.37$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{1}{C_5 s}$	$\frac{L_L s}{C_L L_L s^2 + 1} +$	$-R_L$	 	 	 	 	139
10.37\NVALID-ORDER-378 $Z(s) = 1$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{1}{C_5 s}$	$, \frac{R_L \left(L_L s + \frac{1}{C_L}\right)}{L_L s + R_L + \frac{1}{C_L}}$	$\left(\frac{\overline{s}}{L}\right)$	 	 	 	 	139
10.37 <b>9</b> NVALID-ORDER-379 $Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{I}{C_5 R}$	$R_{\frac{5}{5}s+1}, R_L$		 	 	 	 	139
10.38 ONVALID-ORDER- $380 Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{I}{C_5 R}$	$\left(\frac{R_5}{5s+1}, \frac{1}{C_L s}\right)$		 	 	 	 	140
10.38INVALID-ORDER-381 $Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{R}{C_5 R}$	$\frac{R_5}{5s+1}$ , $\frac{R_L}{C_L R_L s}$	$\overline{+1}$ ) .	 	 	 	 	140
10.38 <b>2</b> NVALID-ORDER-382 $Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{H}{C_5 R}$	$\frac{R_5}{5s+1}, \ R_L + \frac{1}{C}$	$\left(\frac{1}{C_L s}\right)$	 	 	 	 	140
10.38 <b>3</b> NVALID-ORDER-383 $Z(s) = 0$	$(\infty,$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$	$, \frac{I}{C_5 R}$	$\frac{R_5}{5s+1}, L_L s + $	$\frac{1}{C_L s}$	 	 	 	 	140

10.384NVALID-ORDER-384 $Z(s)$ =	$=$ $\Big(\infty,$	$L_2s + \frac{1}{C_2s}$	$, \infty, \infty$	$, \frac{R_5}{C_5 R_5 s + 1},$	$\frac{L_L s}{C_L L_L s^2 + 1}$		 	 	140
10.38 INVALID-ORDER-385 $Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$, \frac{R_5}{C_5 R_5 s + 1},$	$L_L s + R_L + \overline{c}$	$\left(\frac{1}{C_L s}\right)$	 	 	140
10.38 <b>6</b> NVALID-ORDER-386 $Z(s) =$	$=$ $\left(\infty\right)$	$, L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$\bigcirc, \ \frac{R_5}{C_5 R_5 s + 1},$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}$	)	 	 	141
10.38 <b>T</b> NVALID-ORDER-387 $Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$\frac{R_5}{C_5 R_5 s + 1},$	$\frac{L_L s}{C_L L_L s^2 + 1} + R$	L	 	 	141
10.38 NVALID-ORDER-388 $Z(s)$ =	$=$ $\left(\infty\right)$	$, L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$0, \frac{R_5}{C_5 R_5 s + 1},$	$\frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$	)	 	 	141
10.389NVALID-ORDER-389 $Z(s)$ =	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$R_5 + \frac{1}{C_5 s}$	$, R_L $ $\ldots$		 	 	141
10.39 <b>0</b> NVALID-ORDER-390 $Z(s) =$	$=$ $(\infty,$	$L_2s + \frac{1}{C_2s}$	$, \infty, \infty$	$R_5 + \frac{1}{C_5 s}$	$, \frac{1}{C_L s}$ $\cdot \cdot \cdot$		 	 	141
10.39INVALID-ORDER-391 $Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$R_5 + \frac{1}{C_5 s}$	$, \frac{R_L}{C_L R_L s + 1}$		 	 	142
10.39 <b>2</b> NVALID-ORDER-392 $Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$R_5 + \frac{1}{C_5 s}$	$R_L + \frac{1}{C_L s}$		 	 	142
10.39 <b>B</b> NVALID-ORDER-393 $Z(s) =$	$= (\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$R_5 + \frac{1}{C_5 s}$	$, L_L s + \frac{1}{C_L s}$		 	 	142
10.39#NVALID-ORDER-394 $Z(s)$ =	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$R_5 + \frac{1}{C_5 s}$	$, \frac{L_L s}{C_L L_L s^2 + 1}$		 	 	142
10.39 INVALID-ORDER-395 $Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$R_5 + \frac{1}{C_5 s}$	$, L_L s + R_L + \frac{1}{2}$	$\frac{1}{C_L s}$ )	 	 	142
10.39 <b>6</b> NVALID-ORDER-396 $Z(s)$ =	$=$ $\left(\infty\right)$	$, L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$c, R_5 + \frac{1}{C_5 s}$	$\frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}$	$\left( \frac{1}{2} \right)^{2} \cdot \cdot \cdot \cdot$	 	 	143
10.39 <b>T</b> NVALID-ORDER-397 $Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$R_5 + \frac{1}{C_5 s}$	$, \frac{L_L s}{C_L L_L s^2 + 1} + I$	$R_L$ )	 	 	143
10.39\$NVALID-ORDER-398 $Z(s)$ =	$=$ $\left(\infty\right)$	$, L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$c, R_5 + \frac{1}{C_5 s}$	$\frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$	$\left(\frac{1}{2}\right)^{2}$	 	 	143
10.39 <b>9</b> NVALID-ORDER-399 $Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$L_5s + \frac{1}{C_5}$	$\overline{s}$ , $R_L$ )		 	 	143
10.40 ONVALID-ORDER- $400 Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$L_5s + \frac{1}{C_5}$	$\frac{1}{s}$ , $\frac{1}{C_L s}$ )		 	 	143
10.40INVALID-ORDER-401 $Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$L_5s + \frac{1}{C_5}$	$\frac{R_L}{C_L R_L s + 1}$		 	 	144
10.40 <b>2</b> NVALID-ORDER-402 $Z(s) =$	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$L_5s + \frac{1}{C_5}$	$\frac{1}{s}$ , $R_L + \frac{1}{C_L s}$		 	 	144
10.40 <b>B</b> NVALID-ORDER-403 $Z(s) =$	$= (\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$L_5s + \frac{1}{C_5}$	$\frac{1}{s}$ , $L_L s + \frac{1}{C_L s}$		 	 	144
10.40 <b>4</b> NVALID-ORDER-404 $Z(s)$ =	$=$ $(\infty,$	$L_2 s + \frac{1}{C_2 s}$	$, \infty, \infty$	$L_5s + \frac{1}{C_5}$	$\frac{L_L s}{C_L L_L s^2 + 1}$		 	 	144
10.40 INVALID-ORDER-405 $Z(s) =$	$=\left( \infty,\right.$	$L_2s + \frac{1}{C_2s}$	$, \infty, \infty$	$L_5s + \frac{1}{C_5}$	$_{\overline{s}}, \ L_L s + R_L +$	$\frac{1}{C_L s}$ ) .	 	 	144

10.40 <b>6</b> NVALID-ORDER-406 $Z(s)=\langle$	$\left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.40 <b>T</b> NVALID-ORDER-407 $Z(s) = ($	$\left(\infty, L_{2}s + \frac{1}{C_{2}s}, \infty, \infty, L_{5}s + \frac{1}{C_{5}s}, \frac{L_{L}s}{C_{L}L_{L}s^{2} + 1} + R_{L}\right)$
10.40&NVALID-ORDER-408 $Z(s) = 1$	$\left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \ \dots \ $
10.40 <b>9</b> NVALID-ORDER-409 $Z(s) = ($	$\left(\infty, L_{2}s + \frac{1}{C_{2}s}, \infty, \infty, \frac{L_{5}s}{C_{5}L_{5}s^{2}+1}, R_{L}\right)$
10.41 <b>©</b> NVALID-ORDER-410 $Z(s) = ($	$\left(\infty, L_{2}s + \frac{1}{C_{2}s}, \infty, \infty, \frac{L_{5}s}{C_{5}L_{5}s^{2}+1}, \frac{1}{C_{L}s}\right)$
10.41 INVALID-ORDER-411 $Z(s)=\langle$	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, \frac{R_L}{C_LR_Ls+1}\right)$
10.41 <b>2</b> NVALID-ORDER-412 $Z(s) = ($	$\left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$
10.41 <b>B</b> NVALID-ORDER-413 $Z(s)=($	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, L_Ls + \frac{1}{C_Ls}\right)$
10.414NVALID-ORDER-414 $Z(s)=\langle$	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
10.41 SNVALID-ORDER-415 $Z(s) = ($	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.416NVALID-ORDER-416 $Z(s) = 1$	$\left(\infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right) \ \dots \ $
10.41 <b>T</b> NVALID-ORDER-417 $Z(s) = ($	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
10.41\&NVALID-ORDER-418 $Z(s) = 1$	$\left(\infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.41 <b>9</b> NVALID-ORDER-419 $Z(s) = ($	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, R_L\right)$
10.42 <b>0</b> NVALID-ORDER-420 $Z(s) = ($	$(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls})$
10.42INVALID-ORDER-421 $Z(s) = ($	$(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls + 1})$
10.42 <b>2</b> NVALID-ORDER-422 $Z(s) = ($	$(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls})$
10.42 <b>B</b> NVALID-ORDER-423 $Z(s) = ($	$(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls})$
10.424NVALID-ORDER-424 $Z(s) = \langle$	$(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1})$
10.42 <b>Б</b> NVALID-ORDER-425 $Z(s)=($	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.426NVALID-ORDER-426 $Z(s) = 1$	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)\right)$
10.42 <b>T</b> NVALID-ORDER-427 $Z(s) = ($	$\left(\infty, L_2s + \frac{1}{C_2s}, \infty, \infty, L_5s + R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$

$$\begin{aligned} & 10.42\$\text{NVALID-ORDER-428} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_2s + \frac{1}{C_2s}\right)}{R_Ls + R_L + \frac{1}{C_2s}} \right) \end{aligned}$$
 
$$149 \\ & 10.42\$\text{NVALID-ORDER-430} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{1}{C_5s} \right)$$
 
$$149 \\ & 10.43\$\text{NVALID-ORDER-430} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{1}{C_5s} \right)$$
 
$$140 \\ & 10.43\$\text{NVALID-ORDER-431} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{R_L}{C_5s} \right)$$
 
$$150 \\ & 10.43\$\text{NVALID-ORDER-432} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ L_2s + \frac{1}{C_2s} \right)$$
 
$$150 \\ & 10.43\$\text{NVALID-ORDER-433} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ L_2s + \frac{1}{C_2s} \right)$$
 
$$150 \\ & 10.43\$\text{NVALID-ORDER-434} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ L_2s + \frac{1}{C_2s} \right)$$
 
$$150 \\ & 10.43\$\text{NVALID-ORDER-435} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ C_2s + \frac{1}{R_5} + \frac{1}{L_5s}} \right)$$
 
$$151 \\ & 10.43\$\text{NVALID-ORDER-435} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ C_2s + \frac{1}{R_5} + \frac{1}{L_5s}} \right)$$
 
$$151 \\ & 10.43\$\text{NVALID-ORDER-437} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{1}{C_2s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ C_2s + \frac{1}{R_5} + \frac{1}{R_5}, \ C_2s + \frac{1}{R_5} + \frac{1}{L_5s}} \right)$$
 
$$151 \\ & 10.43\$\text{NVALID-ORDER-438} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{1}{C_2s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ C_2s + \frac{1}{R_5} + \frac{1}{L_5s}} \right)$$
 
$$151 \\ & 10.43\$\text{NVALID-ORDER-430} \ Z(s) = \left( \infty, \ L_2s + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{1}{C_2s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ C_2s + \frac{1}{R_5} + \frac{1}{C_2s}, \ C_2s + \frac{1}{R_5} + \frac{1}{C_2s}} \right)$$
 
$$151 \\ & 10.44\$\text{NVALID-ORDER-440} \ Z(s) =$$

10.448NVALID-ORDER- $448$ $Z(s) =$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$ ,	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + F$	$R_5, \frac{R_L \left(L_L s - \frac{1}{L_L s + R_L}\right)}{L_L s + R_L}$	$\left(\frac{+\frac{1}{C_L s}}{+\frac{1}{C_L s}}\right)$	 	 	 153
10.449NVALID-ORDER- $449$ $Z(s) =$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty, \ \infty,$	$\frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}$	$, R_L $		 	 	 153
10.45 ONVALID-ORDER- $450$ $Z(s) =$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty, \ \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}$	$, \frac{1}{C_L s} $		 	 	 153
10.45INVALID-ORDER-451 $Z(s) =$	\			- 3-	/		 	 	 154
10.45 <b>2</b> NVALID-ORDER-452 $Z(s) =$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$ ,	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}$	$, R_L + \frac{1}{C_L s}$	)	 	 	 154
10.458NVALID-ORDER- $453$ $Z(s) =$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$ ,	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}$	$, L_L s + \frac{1}{C_L}$	$\overline{s}$ )	 	 	 154
10.454NVALID-ORDER-454 $Z(s) =$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$ ,	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}$	$, \frac{L_L s}{C_L L_L s^2 + 1}$	)	 	 	 154
10.45 NVALID-ORDER-455 $Z(s) =$	\			- 3 -		,	 	 	 154
10.45 <b>6</b> NVALID-ORDER- $456$ $Z(s) =$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$ ,	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}$	$, \frac{1}{C_L s + \frac{1}{R_L} +}$	$\frac{1}{L_L s}$ .	 	 	 155
10.45 <b>T</b> NVALID-ORDER-457 $Z(s) =$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$ ,	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}$	$, \frac{L_L s}{C_L L_L s^2 + 1}$	$+R_L$	 	 	 155
10.45 NVALID-ORDER-458 $Z(s) =$	$\left(\infty,\right.$	$L_2s + \frac{1}{C_2s},$	$\infty$ , $\infty$ ,	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}$	$, \frac{R_L \left(L_L s + \frac{1}{C}\right)}{L_L s + R_L + \frac{1}{C}}$	$\frac{\frac{1}{C_L s}}{\frac{1}{C_L s}}\right)  .$	 	 	 155
10.45 <b>9</b> NVALID-ORDER-459 $Z(s) =$	$\Big(\infty, \ .$	$L_2s + R_2 +$	$\frac{1}{C_2s}$ , $\infty$	$, \infty, R_5, \frac{1}{C_L s}$	$\left( rac{1}{s}  ight)   \cdot   \cdot   \cdot    \cdot  $		 	 	 155
10.46 ONVALID-ORDER- $460 Z(s) = 10.46$	$(\infty, 1)$	$L_2s + R_2 +$	$\frac{1}{C_2s}$ , $\infty$	$, \infty, R_5, \frac{1}{C_L}$	$\frac{R_L}{R_L s+1}$ )		 	 	 155
10.46INVALID-ORDER- $461$ $Z(s) = 1$	$(\infty, ]$	$L_2s + R_2 +$	$\frac{1}{C_2s}$ , $\infty$	$, \infty, R_5, R_L$	$+\frac{1}{C_L s}$ ).		 	 	 156
10.46 <b>2</b> NVALID-ORDER- $462 Z(s) = 1$	$(\infty, ]$	$L_2s + R_2 +$	$\frac{1}{C_2s}$ , $\infty$	$, \infty, R_5, L_L$	$s + \frac{1}{C_L s}$ ).		 	 	 156
10.463NVALID-ORDER- $463$ $Z(s) = 1$	$(\infty, ]$	$L_2s + R_2 +$	$\frac{1}{C_2s}$ , $\infty$	$, \infty, R_5, \frac{1}{C_L}$	$\frac{L_L s}{L_L s^2 + 1}$ ) .		 	 	 156
10.464NVALID-ORDER- $464 Z(s) = 10.464$	$(\infty, 1)$	$L_2s + R_2 +$	$\frac{1}{C_2s}$ , $\infty$	$, \infty, R_5, L_L$	$s + R_L + \overline{C}$	$\left(\frac{1}{L^s}\right)$	 	 	 156
10.46 INVALID-ORDER- $465$ $Z(s) =$	$(\infty,$	$L_2s + R_2 +$	$-\frac{1}{C_2s}$ , $\propto$	$\infty$ , $\infty$ , $R_5$ , $\overline{C_L}$	$\frac{1}{s + \frac{1}{R_L} + \frac{1}{L_L s}}$	·	 	 	 156
10.46 <b>6</b> NVALID-ORDER-466 $Z(s) = 10.46$	$(\infty, $	$L_2s + R_2 +$	$\frac{1}{C_2s}$ , $\infty$	$, \infty, R_5, \overline{C_L}$	$\frac{L_L s}{L_L s^2 + 1} + R$	$_{L}\Big)$	 	 	 157

10.46 <b>T</b> NVALID-ORDER-467 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, R_5, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
10.46\ng{NVALID-ORDER-468} $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s}, R_L)$
10.46 <b>9</b> NVALID-ORDER-469 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s}, \frac{1}{C_Ls})$
10.470NVALID-ORDER-470 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls + 1}) \qquad \dots \qquad $
10.47INVALID-ORDER-471 $Z(s) = 0$	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s}, R_L + \frac{1}{C_Ls})$
10.472NVALID-ORDER-472 $Z(s)=($	$\left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$
10.47 <b>B</b> NVALID-ORDER-473 $Z(s)=($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1})$
10.47\pinvalid-Order-474 $Z(s) = 0$	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls})$
10.475NVALID-ORDER-475 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
10.476NVALID-ORDER-476 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L)$
10.47 NVALID-ORDER-477 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$
10.47&NVALID-ORDER-478 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5}{C_5R_5s+1}, R_L)$
10.47 <b>9</b> NVALID-ORDER-479 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5}{C_5R_5s+1}, \frac{1}{C_Ls})$
10.48 <b>0</b> NVALID-ORDER-480 $Z(s) = ($	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5}{C_5R_5s + 1}, \frac{R_L}{C_LR_Ls + 1}\right)$
10.48INVALID-ORDER-481 $Z(s) = ($	$\left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$
10.48 <b>2</b> NVALID-ORDER-482 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5}{C_5R_5s+1}, L_Ls + \frac{1}{C_Ls})$
10.48 <b>B</b> NVALID-ORDER-483 $Z(s) = ($	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5}{C_5R_5s + 1}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$
10.484NVALID-ORDER-484 $Z(s)=\langle$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5}{C_5R_5s + 1}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.485 NVALID-ORDER-485 $Z(s)=\langle$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5}{C_5R_5s + 1}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
10.486NVALID-ORDER-486 $Z(s) = 0$	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5}{C_5R_5s+1}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L)$
10.48 TNVALID-ORDER-487 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5}{C_5R_5s + 1}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \dots \dots$
	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, R_5 + \frac{1}{C_5s}, R_L\right) \qquad \dots \qquad $

10.48¶NVALID-ORDER-489 $Z(s)=\{$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$
10.49 <b>0</b> NVALID-ORDER-490 $Z(s)=\left( \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$
10.49INVALID-ORDER-491 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls})$
10.49 <b>2</b> NVALID-ORDER-492 $Z(s) = ($	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
10.49 <b>B</b> NVALID-ORDER-493 $Z(s) = ($	$\left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$
10.494NVALID-ORDER-494 $Z(s)=\langle$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.49\$NVALID-ORDER-495 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$
10.496NVALID-ORDER-496 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L)$
10.49 <b>T</b> NVALID-ORDER-497 $Z(s) = 1$	$\left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, L_5s + \frac{1}{C_5s}, R_L)$
10.49 <b>9</b> NVALID-ORDER-499 $Z(s) = ($	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$
10.50 <b>0</b> NVALID-ORDER-500 $Z(s) = ($	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls + 1}\right)$
10.50INVALID-ORDER-501 $Z(s)=\langle$	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$
10.50 <b>2</b> NVALID-ORDER-502 $Z(s) = \langle$	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right) \ \dots \ $
10.50 <b>B</b> NVALID-ORDER-503 $Z(s)=($	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$
10.504NVALID-ORDER-504 $Z(s)=\langle$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, L_5s + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.505NVALID-ORDER-505 $Z(s) = 1$	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.506NVALID-ORDER-506 $Z(s)=\langle$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
10.50 <b>T</b> NVALID-ORDER-507 $Z(s) = 1$	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots \ $
	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, R_L)$
10.50 <b>9</b> NVALID-ORDER-509 $Z(s) = ($	$\left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$
10.510NVALID-ORDER-510 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2 + 1}, \frac{R_L}{C_LR_Ls + 1})$

10.532NVALID-ORDER-532 $Z(s) = 1$	$\left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right) \dots \dots$
10.53\( \mathbb{B}\)NVALID-ORDER-533 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right) \dots \dots$
10.534NVALID-ORDER-534 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, L_Ls + R_L + \frac{1}{C_Ls}\right) \dots \dots$
10.53 Б NVALID-ORDER-535 $Z(s)=\left \right.$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right) \dots \dots$
10.536NVALID-ORDER-536 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.53 INVALID-ORDER-537 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)  \dots $
10.53\NVALID-ORDER-538 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, R_L)$
10.53 <b>9</b> NVALID-ORDER-539 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{1}{C_Ls})$
10.54©NVALID-ORDER-540 $Z(s) = ($	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ \frac{R_L}{C_LR_Ls + 1}\right)$
10.54INVALID-ORDER-541 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, R_L + \frac{1}{C_Ls})$
10.542NVALID-ORDER-542 $Z(s) = ($	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, L_Ls + \frac{1}{C_Ls}\right)$
10.54 <b>B</b> NVALID-ORDER-543 $Z(s) = ($	$(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{L_Ls}{C_LL_Ls^2 + 1})$
10.544NVALID-ORDER-544 $Z(s)=\langle$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.545NVALID-ORDER-545 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right) - \dots $
10.546NVALID-ORDER-546 $Z(s) = \langle$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$
10.54 <b>T</b> NVALID-ORDER-547 $Z(s) = 1$	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.549NVALID-ORDER-549 $Z(s) = 1$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{1}{C_Ls}\right)$
10.55 <b>0</b> NVALID-ORDER-550 $Z(s) = ($	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{R_L}{C_LR_Ls + 1}\right) \dots \dots$

10.55INVALID-ORDER-551 $Z(s) =$	$\left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, L_Ls + \frac{1}{C_Ls}\right) \dots \dots$
10.55\( \mathbb{E}\)NVALID-ORDER-553\( Z(s) = 1 \)	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.55\NVALID-ORDER-555 $Z(s) =$	$\left(\infty, L_2s + R_2 + \frac{1}{C_2s}, \infty, \infty, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)\right) - \dots $
10.556NVALID-ORDER-556 $Z(s) =$	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.55 <b>T</b> NVALID-ORDER-557 $Z(s) =$	$\left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots $
10.55\( \text{NVALID-ORDER-558} \( Z(s) = 1 \)	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5, \frac{1}{C_Ls}\right)$
10.559NVALID-ORDER- $559 Z(s) = 1$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5, \frac{R_L}{C_LR_Ls+1}\right)$
10.56 ONVALID-ORDER- $560 Z(s) = 10.56$	$(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5, R_L + \frac{1}{C_Ls})$
10.56INVALID-ORDER- $561$ $Z(s) = 1$	$(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5, L_Ls + \frac{1}{C_Ls})$
10.56 <b>2</b> NVALID-ORDER- $562 Z(s) = 1$	$(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5, \frac{L_Ls}{C_LL_Ls^2+1})'$
10.563NVALID-ORDER- $563$ $Z(s) = 1$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.564NVALID-ORDER-564 $Z(s) =$	$\left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right) \ \dots \ $
10.56 Invalid-order- $565$ $Z(s) = 10.56$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right) \dots \dots$
10.56 NVALID-ORDER- $566$ $Z(s) = 1$	$\left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right) \dots \dots$
10.56 <b>T</b> NVALID-ORDER- $567$ $Z(s) = 1$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{1}{C_5s}, R_L\right)$
10.56\( \mathbb{R}\) NVALID-ORDER-568 $Z(s) = 1$	$(\infty, \frac{L_{2s}}{C_{2}L_{2}s^{2}+1} + R_{2}, \infty, \infty, \frac{1}{C_{5}s}, \frac{1}{C_{L}s})$
	$\left(\infty, \frac{L_{2s}}{C_{2}L_{2}s^{2}+1} + R_{2}, \infty, \infty, \frac{1}{C_{5s}}, \frac{R_{L}}{C_{L}R_{L}s+1}\right)$
	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $

10.57 <b>I</b> NVALID-ORDER-571 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
10.572NVALID-ORDER-572 $Z(s) =$	$\left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
10.57 <b>B</b> NVALID-ORDER-573 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.57#NVALID-ORDER-574 $Z(s) =$	$\left(\infty, \ \frac{L_{2}s}{C_{2}L_{2}s^{2}+1} + R_{2}, \ \infty, \ \infty, \ \frac{1}{C_{5}s}, \ \frac{1}{C_{L}s + \frac{1}{R_{L}} + \frac{1}{L_{L}s}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.57 SNVALID-ORDER-575 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
10.576NVALID-ORDER-576 $Z(s) =$	$\left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots \ $
10.57 TNVALID-ORDER-577 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{R_5}{C_5R_5s+1}, R_L\right)$
10.57&NVALID-ORDER-578 $Z(s)=$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{R_5}{C_5R_5s+1}, \frac{1}{C_Ls}\right)$
10.57 <b>9</b> NVALID-ORDER-579 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{R_5}{C_5R_5s+1}, \frac{R_L}{C_LR_Ls+1}\right)$
10.58 <b>0</b> NVALID-ORDER-580 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{R_5}{C_5R_5s+1}, R_L + \frac{1}{C_Ls}\right)$
10.58INVALID-ORDER-581 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{R_5}{C_5R_5s+1}, L_Ls + \frac{1}{C_Ls}\right)$
10.58 <b>2</b> NVALID-ORDER-582 $Z(s) =$	$\left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$
$10.58 \texttt{B} \text{NVALID-ORDER-583} \ Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{R_5}{C_5R_5s+1}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.584NVALID-ORDER-584 $Z(s)=$	$\left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right) \dots \dots$
10.58 SNVALID-ORDER-585 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{R_5}{C_5R_5s+1}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$
10.58©NVALID-ORDER-586 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{R_5}{C_5R_5s+1}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \dots \dots$
$10.58 {\tt T} {\tt NVALID-ORDER-587} \ Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5 + \frac{1}{C_5s}, R_L\right)$
10.58\&NVALID-ORDER-588 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5 + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$
10.58 <b>9</b> NVALID-ORDER-589 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5 + \frac{1}{C_5s}, \frac{\dot{R}_L}{C_LR_Ls+1}\right)$
10.59 ONVALID-ORDER-590 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5 + \frac{1}{C_5s}, R_L + \frac{1}{C_Ls}\right)$
10.59INVALID-ORDER-591 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5 + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right) \dots \dots$
10.592NVALID-ORDER-592 $Z(s) =$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5 + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$

10.59 <b>&amp;</b> NVALID-ORDER-593 $Z(s) = ($	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, R_5 + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.59#NVALID-ORDER-594 $Z(s)=\langle$	$\left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.59 INVALID-ORDER-595 $Z(s)=($	$\left(\infty, \frac{L_{2}s}{C_{2}L_{2}s^{2}+1} + R_{2}, \infty, \infty, R_{5} + \frac{1}{C_{5}s}, \frac{L_{L}s}{C_{L}L_{L}s^{2}+1} + R_{L}\right)$
10.596NVALID-ORDER-596 $Z(s) = 1$	$\left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots \ $
	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, L_5s + \frac{1}{C_5s}, R_L\right) \dots $ (183)
10.59&NVALID-ORDER-598 $Z(s)=\left(\rule{0mm}{2.5mm}\right.$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{1}{C_Ls}\right)$
10.59 <b>9</b> NVALID-ORDER-599 $Z(s) = ($	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right)$
10.60 <b>©</b> NVALID-ORDER-600 $Z(s)=\langle$	$\left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$
10.60 INVALID-ORDER-601 $Z(s)=\langle$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, L_5s + \frac{1}{C_5s}, L_Ls + \frac{1}{C_Ls}\right)$
10.60 <b>2</b> NVALID-ORDER-602 $Z(s) = ($	$\left(\infty, \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right) \dots \dots$
10.60 <b>&amp;</b> NVALID-ORDER-603 $Z(s)=($	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, L_5s + \frac{1}{C_5s}, L_Ls + R_L + \frac{1}{C_Ls}\right)$
10.604NVALID-ORDER-604 $Z(s)=\langle$	$\left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{L_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
10.60\$NVALID-ORDER-605 $Z(s) = ($	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, L_5s + \frac{1}{C_5s}, \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right) \dots \dots$
10.60©NVALID-ORDER-606 $Z(s) = 1$	$\left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $
	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, R_L\right)$
10.60&NVALID-ORDER-608 $Z(s)=\langle$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, \frac{1}{C_Ls}\right)$
10.60 <b>9</b> NVALID-ORDER-609 $Z(s) = ($	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, \frac{R_L}{C_LR_Ls+1}\right)$
10.61©NVALID-ORDER-610 $Z(s) = ($	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, R_L + \frac{1}{C_Ls}\right)$
10.61INVALID-ORDER-611 $Z(s)=\langle$	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, L_Ls + \frac{1}{C_Ls}\right)$
10.612NVALID-ORDER-612 $Z(s) = ($	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, \frac{L_Ls}{C_LL_Ls^2+1}\right)$
10.61 <b>B</b> NVALID-ORDER-613 $Z(s) = ($	$\left(\infty, \frac{L_2s}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{L_5s}{C_5L_5s^2+1}, L_Ls + R_L + \frac{1}{C_Ls}\right) \dots \dots$
10.61#NVALID-ORDER-614 $Z(s)=\langle$	$\left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $

$$\begin{array}{ll} 10.61 \text{INVALID-ORDER-615} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ \frac{L_{1}}{C_{2}L_{2}^{2}+1}, \ \frac{L_{2}L_{2}}{C_{2}L_{2}L_{2}^{2}+1} + R_{L} \right) & 186 \\ 10.61 \text{INVALID-ORDER-616} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ \frac{L_{3}}{C_{2}L_{3}^{2}+1}, \ \frac{R_{L}(L_{3}L_{3}L_{2}^{2}+1)}{C_{2}L_{3}} & \frac{R_{L}(L_{3}L_{3}L_{2}^{2}+1)}{C_{2}L_{3}} & 187 \\ 10.61 \text{INVALID-ORDER-618} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ L_{3}s + R_{5} + \frac{1}{C_{4}s}, \ \frac{R_{L}}{C_{2}s} \right) & 187 \\ 10.61 \text{INVALID-ORDER-619} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ L_{3}s + R_{5} + \frac{1}{C_{6}s}, \ \frac{R_{L}}{C_{2}s} \right) & 187 \\ 10.62 \text{INVALID-ORDER-620} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ L_{3}s + R_{5} + \frac{1}{C_{4}s}, \ \frac{R_{L}}{C_{2}s} \right) & 187 \\ 10.62 \text{INVALID-ORDER-620} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ L_{3}s + R_{5} + \frac{1}{C_{4}s}, \ \frac{R_{L}}{C_{2}s} \right) & 187 \\ 10.62 \text{INVALID-ORDER-622} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ L_{3}s + R_{5} + \frac{1}{C_{4}s}, \ \frac{R_{L}}{C_{2}s} \right) & 188 \\ 10.62 \text{INVALID-ORDER-622} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ L_{3}s + R_{5} + \frac{1}{C_{4}s}, \ \frac{1}{C_{4}s}, \ \frac{1}{C_{4}L_{4}s} \right) & 188 \\ 10.62 \text{INVALID-ORDER-622} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ L_{3}s + R_{5} + \frac{1}{C_{4}s}, \ \frac{1}{C_{4}s} + \frac{1}{C_{4}s} \right) & 188 \\ 10.62 \text{INVALID-ORDER-623} \ Z(s) = \left( \infty, \ \frac{L_{2}}{C_{2}L_{2}^{2}+1} + R_{2}, \ \infty, \ \infty, \ L_{5}s + R_{5} + \frac{1}{C_{4}s}, \ \frac{1}{C_{5}s}, \$$

$$\begin{aligned} & 10.63 \text{INVALID-ORDER-635} \ Z(s) = \left( \infty, \ \frac{L_{02}}{C_{2}L_{2}s^{2}+1} + R_{2}, \ \infty, \ \infty, \ \frac{1}{C_{0}s^{4} + L_{2}^{2}}, \ \frac{L_{0}L_{0}s^{2}+1}{C_{0}L_{0}s^{2}} + R_{L} \right) & 190 \\ & 10.63 \text{INVALID-ORDER-637} \ Z(s) = \left( \infty, \ \frac{L_{02}}{C_{2}L_{2}s^{2}+1} + R_{2}, \ \infty, \ \infty, \ \frac{1}{C_{0}s^{4} + L_{0}^{2}}, \ \frac{R_{c}(L_{c}s^{2}+c_{c}^{2})}{L_{c}s^{4} + R_{c}L_{c}^{2}} \right) & 191 \\ & 10.63 \text{INVALID-ORDER-637} \ Z(s) = \left( \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{2}, \ \infty, \ \infty, \ \frac{L_{02}s^{2}+1}{C_{0}s^{4} + R_{0}} + R_{0}, \ C_{c}s^{2} \right) & 191 \\ & 10.63 \text{INVALID-ORDER-639} \ Z(s) = \left( \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{2}, \ \infty, \ \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ C_{c}s^{2} \right) & 191 \\ & 10.63 \text{INVALID-ORDER-640} \ Z(s) = \left( \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{2}, \ \infty, \ \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ C_{c}s^{2} \right) & 191 \\ & 10.64 \text{INVALID-ORDER-640} \ Z(s) = \left( \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ L_{01}s^{2} \right) & 191 \\ & 10.64 \text{INVALID-ORDER-642} \ Z(s) = \left( \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ L_{01}s^{2} \right) & 192 \\ & 10.64 \text{INVALID-ORDER-642} \ Z(s) = \left( \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ L_{01}s^{2} \right) & 192 \\ & 10.64 \text{INVALID-ORDER-642} \ Z(s) = \left( \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \frac{L_{02}s^{2}}{C_{0}s^{2}+1} + R_{0} \right) & 192 \\ & 10.64 \text{INVALID-ORDER-642} \ Z(s) = \left( \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \frac{L_{02}s^{2}}{C_{0}s^{2}+1} + R_{0} \right) & 193 \\ & 10.64 \text{INVALID-ORDER-645} \ Z(s) = \left( \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \infty, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \frac{L_{02}s^{2}}{C_{0}L_{0}s^{2}+1} + R_{0}, \ \frac{L_$$

10.654NVALID-ORDER-654 $Z(s) = 1$	$\left(\infty,\right.$	$\frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	<b>)</b> 4
10.65 NVALID-ORDER-655 $Z(s) = 1$	$\left(\infty,\right.$	$\frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right) \ \dots $	<b>)</b> 4
	\	$\frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \ \dots \ $	<b>}</b> 5
10.65 <b>T</b> NVALID-ORDER-657 $Z(s) = 1$			<b>)</b> 5
		$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{R_L}{C_L R_L s + 1}\right)  \dots \qquad 19$	}5
		$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ R_L + \frac{1}{C_Ls}\right) \qquad \dots \qquad 19$	}5
10.66©NVALID-ORDER-660 $Z(s) = 1$	$\left(\infty,\right.$	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ L_Ls + \frac{1}{C_Ls}\right)  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  \dots  $	<b>)</b> 5
10.66INVALID-ORDER-661 $Z(s) = 1$	$\left(\infty,\right.$	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{L_Ls}{C_LL_Ls^2 + 1} $	<del>)</del> 6
	\	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ L_Ls + R_L + \frac{1}{C_Ls}\right) \ \dots $	<del>)</del> 6
		$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right) \ \dots \ $	<del>)</del> 6
		$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right) \qquad . \ . \ . \ . \ . \ . \ . \ . \ . \ .$	<del>)</del> 6
10.66 NVALID-ORDER-665 $Z(s) = 1$	$\left(\infty,\right.$	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right) \qquad $	<b>)</b> 6
10.66 <b>6</b> NVALID-ORDER-666 $Z(s) = 1$	$\left(\infty,\right.$	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ R_L$	<b>)</b> 7
10.66 <b>T</b> NVALID-ORDER-667 $Z(s) = 1$	$\left(\infty,\right.$	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right) \qquad \dots \qquad 19$	<b>)</b> 7
	\	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls + 1}\right) \ \dots $	)7
10.66 <b>9</b> NVALID-ORDER-669 $Z(s) = 1$	$\left(\infty,\right.$	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)  \dots \qquad 19$	)7
10.67 <b>0</b> NVALID-ORDER-670 $Z(s) = 1$	$\left(\infty,\right.$	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right) \qquad \dots \qquad 19$	<b>)</b> 7

$$\begin{array}{lll} 10.688 \text{NVALID-ORDER-688} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 + \frac{t_2}{t_2} \right)}{t_{2s+1} R_2 + \frac{t_2}{t_2}}, & \infty, & \infty, \ R_0 + \frac{1}{C_5 s}, & \frac{CR_0 s + t_1}{CR_0 s + t_1} \right) \\ 10.688 \text{NVALID-ORDER-689} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_1 + \frac{t_2}{t_2}}, & \infty, & \infty, \ R_5 + \frac{1}{C_5 s}, \ R_L + \frac{1}{C_1 s} \right) \\ 10.698 \text{NVALID-ORDER-690} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_2 + \frac{t_2}{t_2}}, & \infty, & \infty, \ R_5 + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s} \right) \\ 10.698 \text{NVALID-ORDER-691} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_2 + \frac{t_2}{t_2}}, & \infty, & \infty, \ R_5 + \frac{1}{C_5 s}, & \frac{L_L s + L_L}{C_L s + L_L} \right) \\ 10.698 \text{NVALID-ORDER-692} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_2 + \frac{t_2}{t_2}}, & \infty, & \infty, \ R_5 + \frac{1}{C_5 s}, & \frac{L_L s + R_L}{C_L s + \frac{1}{R_L t_L}} \right) \\ 10.698 \text{NVALID-ORDER-693} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_2 + \frac{t_2}{t_2}}, & \infty, & R_5 + \frac{1}{C_5 s}, & \frac{L_L s + R_L}{C_L s + \frac{1}{R_L t_L}} \right) \\ 10.698 \text{NVALID-ORDER-693} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_2 + \frac{t_2}{t_2}}, & \infty, & R_5 + \frac{1}{C_5 s}, & \frac{L_L s + R_L}{C_L s + \frac{t_L}{R_L t_L}} \right) \\ 10.698 \text{NVALID-ORDER-693} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_1 + \frac{t_2}{t_2}}, & \infty, & R_5 + \frac{1}{C_5 s}, & \frac{L_L s + R_L}{C_L s + \frac{t_L}{R_L t_L}} \right) \\ 10.698 \text{NVALID-ORDER-697} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_1 + \frac{t_2}{t_2}}, & \infty, & R_5 + \frac{1}{C_5 s}, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{L_2 s} R_1 + \frac{t_2}{t_2}} \right) \\ 10.698 \text{NVALID-ORDER-697} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_1 + \frac{t_2}{t_2}}, & \infty, & L_5 s + \frac{1}{C_5 s}, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{L_2 s}} \right) \\ 10.698 \text{NVALID-ORDER-697} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{2s+1} R_1 + \frac{t_2}{t_2}}, & \infty, & L_5 s + \frac{1}{C_5 s}, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t_{L_2 s}} \right) \\ 10.698 \text{NVALID-ORDER-697} \ Z(s) = \left( \infty, & \frac{R_0 \left( t_2 s + \frac{t_2}{t_2} \right)}{t$$

$$\begin{array}{lll} 10.70 \text{ENVALID-ORDER-705} \ Z(s) = \left( \infty, & \frac{R_2 \left( L_{23} + \frac{L_{23}^{-1}}{L_{23}^{-2}} \right)}{L_{23} + R_2 + \frac{L_{23}^{-1}}{L_{23}^{-2}}}, & \infty, & L_{5} + \frac{L_{5}^{-1}}{L_{5}^{-1} + R_{1} + \frac{L_{5}^{-1}}{L_{5}^{-1}}} \right) \\ 10.70 \text{ENVALID-ORDER-706} \ Z(s) = \left( \infty, & \frac{R_2 \left( L_{23} + \frac{L_{23}^{-1}}{L_{23}^{-1} + R_{1} + \frac{L_{23}^{-1}}{L_{23}^{-1}}}, & \infty, & \frac{L_{53}^{-1}}{L_{54}^{-1} + R_{1}^{-1}} \right) \\ 10.70 \text{ENVALID-ORDER-707} \ Z(s) = \left( \infty, & \frac{R_2 \left( L_{23} + \frac{L_{23}^{-1}}{L_{23}^{-1} + R_{1} + \frac{L_{23}^{-1}}{L_{23}^{-1} + R_{1}^{-1}}}, & \infty, & \frac{L_{53}^{-1}}{L_{54}^{-1} + R_{1}^{-1}}, & \frac{1}{C_{25}^{-1}} \right) \\ 10.70 \text{ENVALID-ORDER-708} \ Z(s) = \left( \infty, & \frac{R_2 \left( L_{23} + \frac{L_{23}^{-1}}{L_{23}^{-1} + R_{1}^{-1}}, & \frac{1}{C_{25}^{-1}} \right) \\ R_2 \left( L_{23} + R_{23} + \frac{L_{23}^{-1}}{L_{23}^{-1} + R_{23}^{-1}}, & \infty, & \frac{L_{53}^{-1}}{L_{54}^{-1} + R_{1}^{-1}}, & \frac{R_{1}}{C_{25}^{-1}} \right) \\ 10.70 \text{ENVALID-ORDER-709} \ Z(s) = \left( \infty, & \frac{R_2 \left( L_{23} + \frac{L_{23}^{-1}}{L_{23}^{-1} + R_{2}^{-1}}, & \frac{L_{1}}{C_{25}^{-1}}, & \frac{R_{1}}{C_{25}^{-1}}, & \frac{R_{1}}{C_{25}^{-1}} \right) \\ 10.71 \text{ENVALID-ORDER-710} \ Z(s) = \left( \infty, & \frac{R_2 \left( L_{23} + \frac{L_{23}^{-1}}{L_{23}^{-1} + R_{2}^{-1}}, & \frac{L_{1}}{C_{25}^{-1}}, & \frac{L_{1}}{L_{25}^{-1}}, & \frac{L_{1}}{L_{25}^{-1}}, & \frac{L_{1}}{L_{25}^{-1}} \right) \\ 10.71 \text{ENVALID-ORDER-712} \ Z(s) = \left( \infty, & \frac{R_2 \left( L_{23} + \frac{L_{23}^{-1}}{L_{23}^{-1}}, & \frac{L_{15}^{-1}}{L_{23}^{-1}}, & \frac{L_{15}^{-1}}{L_{25}^{-1}}, & \frac{L_{15}^{-1}}{L_{25}^{-1}}, & \frac{L_{15}^{-1}}{C_{25}^{-1}}, & \frac{L_{15}^{-1}}{L_{25}^{-1}}, & \frac{L_{15}^{-1}}{L_{25}^{-1}}, & \frac{L_{15}^{-1}}{C_{25}^{-1}}, & \frac{L_{15}^{-1}}{C_{25}^{-1}}, & \frac{L_{15}^{-1}}{L_{25}^{-1}}, & \frac{L_{15}^{-1}}{C_{25}^{-1}}, & \frac{L_{15$$

$$\begin{array}{llll} & 10.72 \text{ENVALID-ORDER-722} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + R_{s-1} - \frac{1}{C_{ss}})}{L_{ss} + R_{s-1} - \frac{1}{C_{ss}}}, & \infty, & L_5 s + R_5 + \frac{1}{C_{ss}}, & L_L s + R_L + \frac{1}{C_{Ls}} \right) \\ & 10.72 \text{ENVALID-ORDER-723} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{ss} + R_{s} - \frac{1}{C_{ss}}}, & \infty, & L_5 s + R_5 + \frac{1}{C_{ss}}, & \frac{1}{C_L k_s + \frac{1}{L_s + 1}} \right) \\ & 10.72 \text{ENVALID-ORDER-724} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{ss} + R_s + \frac{1}{C_{ss}}}, & \infty, & L_5 s + R_5 + \frac{1}{C_{ss}}, & \frac{1}{C_L k_s + \frac{1}{L_s + 1}} + R_L \right) \\ & 208 \\ & 10.72 \text{ENVALID-ORDER-725} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{ss} + R_s + \frac{1}{C_{ss}}}, & \infty, & L_5 s + R_5 + \frac{1}{C_{ss}}, & \frac{R_L(L_{Ls} + r_{C_{ss}})}{L_{Ls} + R_s + \frac{1}{C_{ss}}} \right) \\ & 10.72 \text{ENVALID-ORDER-726} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{ss} + R_s + \frac{1}{C_{ss}}}, & \infty, & \frac{1}{C_{ss} + \frac{1}{R_s + r_{C_{ss}}}} \right) \\ & 10.72 \text{ENVALID-ORDER-727} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{2s} + R_s + \frac{1}{C_{ss}}}, & R_L \right) \\ & 10.72 \text{ENVALID-ORDER-728} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{2s} + R_s + \frac{1}{C_{ss}}}, & R_L \right) \\ & 10.72 \text{ENVALID-ORDER-728} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{2s} + R_s + \frac{1}{C_{ss}}}, & R_L \right) \\ & 10.72 \text{ENVALID-ORDER-728} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{2s} + R_s + \frac{1}{C_{ss}}}, & R_L + \frac{1}{C_{ls}} \right) \\ & 10.72 \text{ENVALID-ORDER-729} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{ss} + R_s + \frac{1}{C_{ss}}}, & R_L + \frac{1}{C_{ls}} \right) \\ & 10.72 \text{ENVALID-ORDER-730} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{ss} + R_{s} + \frac{1}{C_{ss}}}, & R_L + \frac{1}{C_{ls}} \right) \\ & 10.73 \text{ENVALID-ORDER-731} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{ss} + R_{s} + \frac{1}{C_{ss}}}, & L_L s + \frac{1}{C_{ls}} \right) \\ & 10.73 \text{ENVALID-ORDER-733} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{ss} + R_{s} + \frac{1}{C_{ss}}}, & \frac{L_L s + R_L + \frac{1}{C_{ls}}}{L_{ss}} \right) \\ & 10.73 \text{ENVALID-ORDER-735} \ Z(s) = \left( \infty, & \frac{R_s(L_{ss} + r_{C_{ss}})}{L_{ss} + R_{s} + \frac{1}{C_{$$

10.73 <b>9</b> NVALID-ORDER-739 $Z(s) = \Big($							 	 	 211
10.740NVALID-ORDER-740 $Z(s) = \Big($	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{L_{5s}}{C_{5}L_{5}s^{2}+1} + R_{5},$	$L_L s + \frac{1}{C_L s}$		 	 	 211
10.74 INVALID-ORDER-74 1 $Z(s) = \Big($									212
10.742NVALID-ORDER-742 $Z(s) = \Big($							 	 	 212
		$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$							212
10.744NVALID-ORDER-744 $Z(s) = \Big($	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5,$	$\frac{L_L s}{C_L L_L s^2 + 1} + 1$	$R_L$ )	 	 	 212
10.74\$NVALID-ORDER-745 $Z(s) = \Big($	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{L_{5s}}{C_5L_5s^2+1} + R_5,$	$\frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$	$\left(\frac{1}{2}\right)$	 	 	 212
10.746NVALID-ORDER-746 $Z(s) = \left( \right.$	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$R_L$ )		 	 	 213
10.74¶NVALID-ORDER-747 $Z(s) = \left( \right.$	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\left(\frac{1}{C_L s}\right)$		 	 	 213
10.74\ngraden Valid-Order-748 $Z(s) = \left( \right.$	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{R_L}{C_L R_L s + 1}$		 	 	 213
`	\	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$		- 3	/		 	 	 213
10.75 <b>0</b> NVALID-ORDER-750 $Z(s) = \left( \right.$	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$L_L s + \frac{1}{C_L s}$		 	 	 213
10.75 INVALID-ORDER-75 1 $Z(s) = \Big($	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{L_L s}{C_L L_L s^2 + 1}$		 	 	 214
10.75 <b>2</b> NVALID-ORDER-752 $Z(s) = \Big($	\	- 4		- 0		/	 	 	 214
10.75 NVALID-ORDER-753 $Z(s) = \left( \frac{1}{2} \right)$							 	 	 214
10.754NVALID-ORDER-754 $Z(s) = \Big($	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}},$	$\frac{L_L s}{C_L L_L s^2 + 1} + R$	$_{L}\Big)$	 	 	 214
10.75 INVALID-ORDER-755 $Z(s) = \left(\frac{1}{2}\right)^{1/2}$	$\infty$ ,	$\frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty$	$, \infty,$	$\frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}},$	$\frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}$	)	 	 	 214

1 Examined H(z) for TIA simple Z2 Z5 ZL:  $\frac{Z_L(Z_2Z_5g_m-Z_2+Z_5)}{Z_2Z_5g_m+2Z_2Z_Lg_m+Z_2+Z_5+4Z_L}$ 

$$H(z) = \frac{Z_L (Z_2 Z_5 g_m - Z_2 + Z_5)}{Z_2 Z_5 g_m + 2 Z_2 Z_L g_m + Z_2 + Z_5 + 4 Z_L}$$

- 2 HP
- 3 BP

**3.1** BP-1 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left( R_2 R_5 g_m - R_2 + R_5 \right)}{C_L L_L R_2 R_5 g_m s^2 + C_L L_L R_2 s^2 + C_L L_L R_5 s^2 + 2L_L R_2 g_m s + 4L_L s + R_2 R_5 g_m + R_2 + R_5}$$

Q: 
$$\frac{C_L\sqrt{\frac{1}{C_LL_L}}(R_2R_5g_m+R_2+R_5)}{2(R_2g_m+2)}$$
 wo: 
$$\sqrt{\frac{1}{C_LL_L}}$$
 bandwidth: 
$$\frac{2(R_2g_m+2)}{C_L(R_2R_5g_m+R_2+R_5)}$$
 K-LP: 0 K-HP: 0 K-BP: 
$$\frac{R_2R_5g_m-R_2+R_5}{2(R_2g_m+2)}$$
 Qz: 0 Wz: None

**3.2** BP-2 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(R_2 R_5 g_m - R_2 + R_5\right)}{C_L L_L R_2 R_5 R_L g_m s^2 + C_L L_L R_2 R_L s^2 + C_L L_L R_5 R_L s^2 + L_L R_2 R_5 g_m s + 2L_L R_2 R_L g_m s + L_L R_2 s + L_L R_5 s + 4L_L R_L s + R_2 R_5 R_L g_m + R_2 R_L + R_5 R_L g_m s + 2L_L R_2 R_L g_m s + L_L R_2 R_2 R_L g_m s + 2L_L R_2 R_L$$

$$\begin{array}{l} \text{Q:} \ \frac{C_L R_L \sqrt{\frac{1}{C_L L_L}} (R_2 R_5 g_m + R_2 + R_5)}{R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L} \\ \text{wo:} \ \sqrt{\frac{1}{C_L L_L}} \\ \text{bandwidth:} \ \frac{R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L}{C_L R_L (R_2 R_5 g_m + R_2 + R_5)} \\ \text{K-LP:} \ 0 \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_L (R_2 R_5 g_m - R_2 + R_5)}{R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

## 4 LP

# 5 BS

**5.1** BS-1 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(R_2 R_5 g_m - R_2 + R_5\right)}{2C_L L_L R_2 g_m s^2 + 4C_L L_L s^2 + C_L R_2 R_5 g_m s + C_L R_2 s + C_L R_5 s + 2R_2 g_m + 4}$$

$$\begin{array}{l} \text{Q:} \ \frac{2L_L\sqrt{\frac{1}{C_LL_L}}}{R_2R_5g_m+R_2+R_5} \\ \text{wo:} \ \sqrt{\frac{1}{C_LL_L}} \\ \text{bandwidth:} \ \frac{R_2R_5g_m+R_2+R_5}{2L_L(R_2g_m+2)} \\ \text{K-LP:} \ \frac{R_2R_5g_m-R_2+R_5}{2(R_2g_m+2)} \\ \text{K-HP:} \ \frac{R_2R_5g_m-R_2+R_5}{2(R_2g_m+2)} \\ \text{K-BP:} \ 0 \\ \text{Qz:} \ \text{None} \\ \text{Wz:} \ \sqrt{\frac{1}{C_LL_L}} \end{array}$$

**5.2** BS-2 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5, \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$\begin{array}{l} \text{Q:} \ \frac{L_L\sqrt{\frac{1}{C_LL_L}}}{R_L(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)} \\ \text{wo:} \ \sqrt{\frac{1}{C_LL_L}} \\ \text{bandwidth:} \ \frac{R_L(R_2R_5g_m+R_2+R_5)}{L_L(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)} \\ \text{K-LP:} \ \frac{R_L(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L} \\ \text{K-HP:} \ \frac{R_L(R_2R_5g_m-R_2+R_5)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L} \\ \text{K-BP:} \ 0 \\ \text{Qz:} \ \text{None} \\ \text{Wz:} \ \sqrt{\frac{1}{C_LL_L}} \end{array}$$

## 6 **GE**

**6.1 GE-1** 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ R_5, \ L_L s + R_L + \frac{1}{C_L s}\right)$$
 
$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(R_2 R_5 g_m - R_2 + R_5\right)}{2C_L L_L R_2 g_m s^2 + 4C_L L_L s^2 + C_L R_2 R_5 g_m s + 2C_L R_2 R_L g_m s + C_L R_2 s + C_L R_5 s + 4C_L R_L s + 2R_2 g_m + 4}$$

$$\begin{aligned} &\text{Q: } \frac{2L_L\sqrt{\frac{1}{C_LL_L}}(R_2g_m+2)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L} \\ &\text{wo: } \sqrt{\frac{1}{C_LL_L}} \\ &\text{bandwidth: } \frac{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}{2L_L(R_2g_m+2)} \end{aligned}$$

$$\begin{aligned} & \text{K-LP: } \frac{R_2R_5g_m - R_2 + R_5}{2(R_2g_m + 2)} \\ & \text{K-HP: } \frac{R_2R_5g_m - R_2 + R_5}{2(R_2g_m + 2)} \\ & \text{K-BP: } \frac{R_L(R_2R_5g_m - R_2 + R_5)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ & \text{Qz: } \frac{L_L\sqrt{\frac{1}{C_LL_L}}}{R_L} \\ & \text{Wz: } \sqrt{\frac{1}{C_LL_L}} \end{aligned}$$

**6.2** GE-2 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(R_{2}R_{5}g_{m} - R_{2} + R_{5}\right)\left(C_{L}L_{L}R_{L}s^{2} + L_{L}s + R_{L}\right)}{C_{L}L_{L}R_{2}R_{5}g_{m}s^{2} + 2C_{L}L_{L}R_{2}s^{2} + C_{L}L_{L}R_{2}s^{2} + 4C_{L}L_{L}R_{L}s^{2} + 2L_{L}R_{2}g_{m}s + 4L_{L}s + R_{2}R_{5}g_{m} + 2R_{2}R_{L}g_{m} + R_{2} + R_{5} + 4R_{L}s^{2} + 4C_{L}L_{L}R_{L}s^{2} + 2L_{L}R_{2}g_{m}s + 4L_{L}s + R_{2}R_{5}g_{m} + 2R_{2}R_{L}g_{m} + R_{2} + R_{5} + 4R_{L}s^{2} + 4C_{L}R_{L}R_{L}s^{2} + 2R_{L}R_{L}g_{m}s^{2} + 2R_$$

$$\begin{aligned} &\text{Q:} \ \frac{C_L \sqrt{\frac{1}{C_L L_L}}}{2(R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L)} \\ &\text{wo:} \ \sqrt{\frac{1}{C_L L_L}} \\ &\text{bandwidth:} \ \frac{2(R_2 g_m + 2)}{C_L (R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L)} \\ &\text{K-LP:} \ \frac{R_L (R_2 R_5 g_m - R_2 + R_5)}{R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L} \\ &\text{K-HP:} \ \frac{R_L (R_2 R_5 g_m - R_2 + R_5)}{R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L} \\ &\text{K-BP:} \ \frac{R_2 R_5 g_m - R_2 + R_5}{2(R_2 g_m + 2)} \\ &\text{Qz:} \ C_L R_L \sqrt{\frac{1}{C_L L_L}} \end{aligned}$$

**6.3** GE-3 
$$Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1 \right)}{C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + 4 C_5 R_L s + R_2 g_m + 1}$$

Q: 
$$\frac{L_5\sqrt{\frac{1}{C_5L_5}}(R_2g_m+1)}{2R_2R_Lg_m+R_2+4R_L}$$

wo: 
$$\sqrt{\frac{1}{C_5L_5}}$$
 bandwidth:  $\frac{2R_2R_Lg_m+R_2+4R_L}{L_5(R_2g_m+1)}$  K-LP:  $R_L$  K-HP:  $R_L$  K-BP:  $-\frac{R_2R_L}{2R_2R_Lg_m+R_2+4R_L}$  Qz:  $\frac{L_5\sqrt{\frac{1}{C_5L_5}}(-R_2g_m-1)}{R_2}$  Wz:  $\sqrt{\frac{1}{C_5L_5}}$ 

**6.4** GE-4 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_5 L_5 R_2 s^2 + L_5 R_2 g_m s + L_5 s - R_2 \right)}{2C_5 L_5 R_2 R_L g_m s^2 + C_5 L_5 R_2 s^2 + 4C_5 L_5 R_L s^2 + L_5 R_2 g_m s + L_5 s + 2R_2 R_L g_m + R_2 + 4R_L g_m s^2 + R_2 g_m s + R_2 g_m s + R_3 g_m s + R_4 g_m s^2 + R_4 g_m s^2 + R_5 g_m s + R$$

$$\begin{aligned} &\text{Q:} \ \frac{C_5\sqrt{\frac{1}{C_5L_5}}(2R_2R_Lg_m + R_2 + 4R_L)}{R_2g_m + 1} \\ &\text{wo:} \ \sqrt{\frac{1}{C_5L_5}} \\ &\text{bandwidth:} \ \frac{R_2g_m + 1}{C_5(2R_2R_Lg_m + R_2 + 4R_L)} \\ &\text{K-LP:} \ -\frac{R_2R_L}{2R_2R_Lg_m + R_2 + 4R_L} \\ &\text{K-HP:} \ -\frac{R_2R_L}{2R_2R_Lg_m + R_2 + 4R_L} \\ &\text{K-BP:} \ R_L \\ &\text{Qz:} \ -\frac{C_5R_2\sqrt{\frac{1}{C_5L_5}}}{R_2g_m + 1} \\ &\text{Wz:} \ \sqrt{\frac{1}{C_5L_5}} \end{aligned}$$

**6.5** GE-5 
$$Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1 \right)}{C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + C_5 R_5 s + 4 C_5 R_L s + R_2 g_m + 1}$$

$$\begin{aligned} &\text{Q: } \frac{L_5\sqrt{\frac{1}{C_5L_5}}(R_2g_m+1)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L} \\ &\text{wo: } \sqrt{\frac{1}{C_5L_5}} \\ &\text{bandwidth: } \frac{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}{L_5(R_2g_m+1)} \\ &\text{K-LP: } R_L \\ &\text{K-HP: } R_L \\ &\text{K-BP: } \frac{R_L(R_2R_5g_m-R_2+R_5)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L} \\ &\text{Qz: } \frac{L_5\sqrt{\frac{1}{C_5L_5}}(R_2g_m+1)}{R_2R_5g_m-R_2+R_5} \\ &\text{Wz: } \sqrt{\frac{1}{C_5L_5}} \end{aligned}$$

**6.6 GE-6** 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$$

$$\begin{aligned} & \text{Q:} \ \frac{C_5R_5\sqrt{\frac{1}{C_5L_5}}(2R_2R_Lg_m + R_2 + 4R_L)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ & \text{wo:} \ \sqrt{\frac{1}{C_5L_5}} \\ & \text{bandwidth:} \ \frac{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L}{C_5R_5(2R_2R_Lg_m + R_2 + 4R_L)} \\ & \text{K-LP:} \ -\frac{R_2R_L}{2R_2R_Lg_m + R_2 + 4R_L} \\ & \text{K-HP:} \ -\frac{R_2R_L}{2R_2R_Lg_m + R_2 + 4R_L} \\ & \text{K-BP:} \ \frac{R_L(R_2R_5g_m - R_2 + R_5)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ & \text{Qz:} \ -\frac{C_5R_2R_5\sqrt{\frac{1}{C_5L_5}}}{R_2R_5g_m - R_2 + R_5} \\ & \text{Wz:} \ \sqrt{\frac{1}{C_5L_5}} \end{aligned}$$

**6.7** GE-7 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$$

$$H(s) = \frac{R_L \left( C_5 L_5 R_2 R_5 g_m s^2 - C_5 L_5 R_2 s^2 + C_5 L_5 R_5 s^2 + L_5 R_2 g_m s + L_5 s + R_2 R_5 g_m - R_2 + R_5 \right)}{C_5 L_5 R_2 R_5 g_m s^2 + 2 C_5 L_5 R_2 R_L g_m s^2 + C_5 L_5 R_2 s^2 + C_5 L_5 R_5 s^2 + 4 C_5 L_5 R_L s^2 + L_5 R_2 g_m s + L_5 s + R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L R_5 g_m + R_5 R_5 g_m +$$

$$\begin{aligned} & \text{Q:} \ \frac{C_5\sqrt{\frac{1}{C_5L_5}}(R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L)}{R_2g_m + 1} \\ & \text{wo:} \ \sqrt{\frac{1}{C_5L_5}} \\ & \text{bandwidth:} \ \frac{R_2g_m + 1}{C_5(R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L)} \\ & \text{K-LP:} \ \frac{R_L(R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ & \text{K-HP:} \ \frac{R_L(R_2R_5g_m - R_2 + R_5)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ & \text{K-BP:} \ R_L \\ & \text{Qz:} \ \frac{C_5\sqrt{\frac{1}{C_5L_5}}(R_2R_5g_m - R_2 + R_5)}{R_2g_m + 1} \\ & \text{Wz:} \ \sqrt{\frac{1}{C_5L_5}} \end{aligned}$$

**6.8** GE-8 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, R_L\right)$$

$$\begin{array}{l} \text{Q:} \ \frac{L_5\sqrt{\frac{1}{C_5L_5}}(R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L)}{R_5(2R_2R_Lg_m + R_2 + 4R_L)} \\ \text{wo:} \ \sqrt{\frac{1}{C_5L_5}} \\ \text{bandwidth:} \ \frac{R_5(2R_2R_Lg_m + R_2 + 4R_L)}{L_5(R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L)} \\ \text{K-LP:} \ \frac{R_L(R_2R_5g_m - R_2 + R_5)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ \text{K-HP:} \ \frac{R_L(R_2R_5g_m - R_2 + R_5)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ \text{K-BP:} \ -\frac{R_2R_L}{2R_2R_Lg_m + R_2 + 4R_L} \\ \text{CZ:} \ \frac{L_5\sqrt{\frac{1}{C_5L_5}}(-R_2R_5g_m + R_2 - R_5)}{R_2R_5} \\ \text{Wz:} \ \sqrt{\frac{1}{C_5L_5}} \end{array}$$

**6.9** GE-9 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_5 s + R_5 g_m - 1 \right)}{C_2 L_2 R_5 g_m s^2 + 2 C_2 L_2 R_L g_m s^2 + C_2 L_2 s^2 + C_2 R_5 s + 4 C_2 R_L s + R_5 g_m + 2 R_L g_m + 1}$$

$$\begin{aligned} &\text{Q: } \frac{L_2\sqrt{\frac{1}{C_2L_2}}(R_5g_m + 2R_Lg_m + 1)}{R_5 + 4R_L} \\ &\text{wo: } \sqrt{\frac{1}{C_2L_2}} \\ &\text{bandwidth: } \frac{R_5 + 4R_L}{L_2(R_5g_m + 2R_Lg_m + 1)} \\ &\text{K-LP: } \frac{R_L(R_5g_m - 1)}{R_5g_m + 2R_Lg_m + 1} \\ &\text{K-HP: } \frac{R_L(R_5g_m - 1)}{R_5g_m + 2R_Lg_m + 1} \\ &\text{K-BP: } \frac{R_5R_L}{R_5 + 4R_L} \\ &\text{Qz: } \frac{L_2\sqrt{\frac{1}{C_2L_2}}(R_5g_m - 1)}{R_5} \\ &\text{Wz: } \sqrt{\frac{1}{C_2L_2}} \end{aligned}$$

**6.10** GE-10 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1 \right)}{C_2 L_2 R_5 g_m s^2 + 2 C_2 L_2 R_L g_m s^2 + C_2 L_2 s^2 + C_2 R_2 R_5 g_m s + 2 C_2 R_2 R_L g_m s + C_2 R_2 s + C_2 R_5 s + 4 C_2 R_L s + R_5 g_m + 2 R_L g_m + 1}$$

$$\begin{aligned} &\text{Q: } \frac{L_2\sqrt{\frac{1}{C_2L_2}}(R_5g_m + 2R_Lg_m + 1)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ &\text{wo: } \sqrt{\frac{1}{C_2L_2}} \\ &\text{bandwidth: } \frac{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L}{L_2(R_5g_m + 2R_Lg_m + 1)} \\ &\text{K-LP: } \frac{R_L(R_5g_m - 1)}{R_5g_m + 2R_Lg_m + 1} \\ &\text{K-HP: } \frac{R_L(R_5g_m - 1)}{R_5g_m + 2R_Lg_m + 1} \\ &\text{K-BP: } \frac{R_L(R_5g_m - 1)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ &\text{Qz: } \frac{L_2\sqrt{\frac{1}{C_2L_2}}(R_5g_m - 1)}{R_2R_5g_m - R_2 + R_5} \end{aligned}$$

Wz: 
$$\sqrt{\frac{1}{C_2L_2}}$$

**6.11 GE-11** 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 L_2 R_2 R_5 g_m s^2 - C_2 L_2 R_2 s^2 + C_2 L_2 R_5 s^2 + L_2 R_5 g_m s - L_2 s + R_2 R_5 g_m - R_2 + R_5 \right)}{C_2 L_2 R_2 g_m s^2 + 2 C_2 L_2 R_2 g_m s^2 + C_2 L_2 R_2 s^2 + C_2 L_2 R_5 s^2 + 4 C_2 L_2 R_L s^2 + L_2 R_5 g_m s + 2 L_2 R_L g_m s + L_2 s + R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L R_5 g_m s + R_2 R_5 g_m s$$

$$\begin{aligned} & \text{Q:} \ \frac{C_2\sqrt{\frac{1}{C_2L_2}}(R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L)}{R_5g_m + 2R_Lg_m + 1} \\ & \text{wo:} \ \sqrt{\frac{1}{C_2L_2}} \\ & \text{bandwidth:} \ \frac{R_5g_m + 2R_Lg_m + 1}{C_2(R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L)} \\ & \text{K-LP:} \ \frac{R_L(R_2R_5g_m - R_2 + R_5)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ & \text{K-HP:} \ \frac{R_L(R_2R_5g_m - R_2 + R_5)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \\ & \text{K-BP:} \ \frac{R_L(R_5g_m - 1)}{R_5g_m + 2R_Lg_m + 1} \\ & \text{Qz:} \ \frac{C_2\sqrt{\frac{1}{C_2L_2}}(R_2R_5g_m - R_2 + R_5)}{R_5g_m - 1} \\ & \text{Wz:} \ \sqrt{\frac{1}{C_2L_2}} \end{aligned}$$

**6.12 GE-12** 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 L_2 R_2 R_5 g_m s^2 - C_2 L_2 R_2 s^2 + C_2 L_2 R_5 s^2 + C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5 \right)}{C_2 L_2 R_2 g_m s^2 + 2 C_2 L_2 R_2 s^2 + C_2 L_2 R_5 s^2 + 4 C_2 L_2 R_L s^2 + C_2 R_2 R_5 s + 4 C_2 R_2 R_L s + R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L R_5 g_m + R_2 R_5 g_m +$$

$$\begin{aligned} &\text{Q:} \ \frac{L_2\sqrt{\frac{1}{C_2L_2}}(R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L)}{R_2(R_5 + 4R_L)} \\ &\text{wo:} \ \sqrt{\frac{1}{C_2L_2}} \\ &\text{bandwidth:} \ \frac{R_2(R_5 + 4R_L)}{L_2(R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L)} \\ &\text{K-LP:} \ \frac{R_L(R_2R_5g_m - R_2 + R_5)}{R_2R_5g_m + 2R_2R_Lg_m + R_2 + R_5 + 4R_L} \end{aligned}$$

## **7** AP

# 8 INVALID-NUMER

8.1 INVALID-NUMER-1  $Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

$$H(s) = \frac{R_L \left( -C_5 R_2 s + R_2 g_m + 1 \right)}{C_5 C_L R_2 R_L s^2 + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + 4 C_5 R_L s + C_L R_2 R_L g_m s + C_L R_L s + R_2 g_m + 1}$$

### Parameters:

$$\begin{array}{c} C_5C_LR_2R_L\sqrt{\frac{R_2g_m+1}{C_5C_LR_2R_L}}\\ \text{Q:} \ \frac{C_5C_LR_2R_Lg_m+C_5R_2+4C_5R_L+C_LR_2R_Lg_m+C_LR_L}{2C_5R_2R_Lg_m+C_5R_2+4C_5R_L+C_LR_2R_Lg_m+C_LR_L}\\ \text{wo:} \ \sqrt{\frac{R_2g_m+1}{C_5C_LR_2R_L}}\\ \text{bandwidth:} \ \frac{2C_5R_2R_Lg_m+C_5R_2+4C_5R_L+C_LR_2R_Lg_m+C_LR_L}{C_5C_LR_2R_L}\\ \text{K-LP:} \ R_L\\ \text{K-HP:} \ 0\\ \text{K-BP:} \ -\frac{C_5R_2R_L}{2C_5R_2R_Lg_m+C_5R_2+4C_5R_L+C_LR_2R_Lg_m+C_LR_L}\\ \text{Qz:} \ 0\\ \text{Wz:} \ \text{None} \end{array}$$

8.2 INVALID-NUMER-2  $Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{-C_5R_2R_5s + R_2R_5g_m - R_2 + R_5}{C_5C_LR_2R_5s^2 + 2C_5R_2R_5g_ms + 4C_5R_5s + C_LR_2R_5g_ms + C_LR_2s + C_LR_5s + 2R_2g_m + 4}$$

# 8.3 INVALID-NUMER-3 $Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L \left( -C_5 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5 \right)}{C_5 C_L R_2 R_5 R_L s^2 + 2 C_5 R_2 R_5 R_L g_m s + C_5 R_2 R_5 s + 4 C_5 R_5 R_L s + C_L R_2 R_5 R_L g_m s + C_L R_2 R_L s + C_L R_5 R_L s + R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L R_5 R_L g_m s + C_L R_5 R_L s + C$$

Q: 
$$\frac{C_5C_LR_2R_5R_L\sqrt{\frac{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}{C_5C_LR_2R_5R_L}}}{\frac{C_5C_LR_2R_5R_L}{C_5C_LR_2R_5R_L}}$$
 wo: 
$$\sqrt{\frac{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}{C_5C_LR_2R_5R_L}}$$
 bandwidth: 
$$\frac{2C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L+C_LR_2R_5R_Lg_m+C_LR_2R_L+C_LR_5R_L}{C_5C_LR_2R_5R_L}}$$
 K-LP: 
$$\frac{R_L(R_2R_5g_m-R_2+R_5)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}$$
 K-HP: 
$$0$$
 K-BP: 
$$-\frac{C_5R_2R_5R_L}{2C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L}$$
 Qz: 
$$0$$
 Wz: None

8.4 INVALID-NUMER-4 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1 \right)}{C_5 C_L R_2 R_5 g_m s^2 + C_5 C_L R_2 R_L s^2 + C_5 C_L R_5 R_L s^2 + C_5 R_2 R_5 g_m s + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + C_5 R_5 s + 4 C_5 R_L s + C_L R_2 R_L g_m s + C_L R_L s + R_2 g_m + 1}$$

Q: 
$$\frac{C_5C_LR_L\sqrt{\frac{R_2g_m+1}{C_5C_LR_L(R_2R_5g_m+R_2+R_5)}}(R_2R_5g_m+R_2+R_5)}{C_5R_2R_5g_m+2C_5R_2R_Lg_m+C_5R_2+C_5R_5+4C_5R_L+C_LR_2R_Lg_m+C_LR_L}$$
 wo: 
$$\sqrt{\frac{R_2g_m+1}{C_5C_LR_L(R_2R_5g_m+R_2+R_5)}}$$
 bandwidth: 
$$\frac{C_5R_2R_5g_m+2C_5R_2R_Lg_m+C_5R_2+C_5R_5+4C_5R_L+C_LR_2R_Lg_m+C_LR_L}{C_5C_LR_L(R_2R_5g_m+R_2+R_5)}$$
 K-LP: 
$$R_L$$
 K-HP: 
$$0$$
 K-BP: 
$$\frac{C_5R_L(R_2R_5g_m-R_2+R_5)}{C_5R_2R_5g_m+2C_5R_2R_Lg_m+C_5R_2+C_5R_5+4C_5R_L+C_LR_2R_Lg_m+C_LR_L}{C_5C_LR_L(R_2R_5g_m-R_2+R_5)}$$
 Qz: 
$$0$$
 Wz: None

# 8.5 INVALID-NUMER-5 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_2 R_5 s + R_5 g_m - 1}{C_2 C_L R_5 s^2 + 4 C_2 s + C_L R_5 g_m s + C_L s + 2 g_m}$$

$$\begin{array}{l} \text{Q:} \ \frac{\sqrt{2}C_{2}C_{L}R_{5}\sqrt{\frac{g_{m}}{C_{2}C_{L}R_{5}}}}{4C_{2}+C_{L}R_{5}g_{m}+C_{L}} \\ \text{wo:} \ \sqrt{2}\sqrt{\frac{g_{m}}{C_{2}C_{L}R_{5}}} \\ \text{bandwidth:} \ \frac{4C_{2}+C_{L}R_{5}g_{m}+C_{L}}{C_{2}C_{L}R_{5}} \\ \text{K-LP:} \ \frac{R_{5}g_{m}-1}{2g_{m}} \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{C_{2}R_{5}}{4C_{2}+C_{L}R_{5}g_{m}+C_{L}} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

8.6 INVALID-NUMER-6 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 R_5 s + R_5 g_m - 1 \right)}{C_2 C_L R_5 R_L s^2 + C_2 R_5 s + 4 C_2 R_L s + C_L R_5 R_L g_m s + C_L R_L s + R_5 g_m + 2 R_L g_m + 1}$$

# 8.7 INVALID-NUMER-7 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, R_L\right)$

$$H(s) = \frac{R_L (C_2 s - C_5 s + g_m)}{4C_2 C_5 R_L s^2 + C_2 s + 2C_5 R_L g_m s + C_5 s + g_m}$$

$$\begin{array}{l} \text{Q:} \ \frac{2C_{2}C_{5}R_{L}\sqrt{\frac{g_{m}}{C_{2}C_{5}R_{L}}}}{C_{2}+2C_{5}R_{L}g_{m}+C_{5}} \\ \text{wo:} \ \frac{\sqrt{\frac{g_{m}}{C_{2}C_{5}R_{L}}}}{2} \\ \text{bandwidth:} \ \frac{C_{2}+2C_{5}R_{L}g_{m}+C_{5}}{4C_{2}C_{5}R_{L}} \\ \text{K-LP:} \ R_{L} \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_{L}(C_{2}-C_{5})}{C_{2}+2C_{5}R_{L}g_{m}+C_{5}} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

8.8 INVALID-NUMER-8 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 s - C_5 s + g_m \right)}{4 C_2 C_5 R_L s^2 + C_2 C_L R_L s^2 + C_2 s + C_5 C_L R_L s^2 + 2 C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m}$$

$$\begin{array}{l} \text{Q:} \ \frac{R_L\sqrt{\frac{g_m}{R_L(4C_2C_5+C_2C_L+C_5C_L)}}(4C_2C_5+C_2C_L+C_5C_L)}{C_2+2C_5R_Lg_m+C_5+C_LR_Lg_m} \\ \text{wo:} \ \sqrt{\frac{g_m}{R_L(4C_2C_5+C_2C_L+C_5C_L)}} \\ \text{bandwidth:} \ \frac{C_2+2C_5R_Lg_m+C_5+C_LR_Lg_m}{R_L(4C_2C_5+C_2C_L+C_5C_L)} \\ \text{K-LP:} \ R_L \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_L(C_2-C_5)}{C_2+2C_5R_Lg_m+C_5+C_LR_Lg_m} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

# 8.9 INVALID-NUMER-9 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$

$$H(s) = \frac{R_L \left( C_2 R_5 s - C_5 R_5 s + R_5 g_m - 1 \right)}{4 C_2 C_5 R_5 R_L s^2 + C_2 R_5 s + 4 C_2 R_L s + 2 C_5 R_5 R_L g_m s + C_5 R_5 s + R_5 g_m + 2 R_L g_m + 1}$$

$$\begin{array}{l} \text{Q:} \ \frac{2C_2C_5R_5R_L\sqrt{\frac{R_5g_m+2R_Lg_m+1}{C_2C_5R_5R_L}}}{C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5R_5} \\ \text{wo:} \ \frac{\sqrt{\frac{R_5g_m+2R_Lg_m+1}{C_2C_5R_5R_L}}}{\frac{2}{2}} \\ \text{bandwidth:} \ \frac{C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5R_5}{4C_2C_5R_5R_L} \\ \text{K-LP:} \ \frac{R_L(R_5g_m-1)}{R_5g_m+2R_Lg_m+1} \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_5R_L(C_2-C_5)}{C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5R_5} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

**8.10** INVALID-NUMER-10 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2R_5s - C_5R_5s + R_5g_m - 1}{4C_2C_5R_5s^2 + C_2C_LR_5s^2 + 4C_2s + C_5C_LR_5s^2 + 2C_5R_5g_ms + C_LR_5g_ms + C_Ls + 2g_m}$$

$$\begin{array}{l} \text{Q:} \ \frac{\sqrt{2}R_5\sqrt{\frac{g_m}{R_5(4C_2C_5+C_2C_L+C_5C_L)}}(4C_2C_5+C_2C_L+C_5C_L)}{4C_2+2C_5R_5g_m+C_LR_5g_m+C_L} \\ \text{wo:} \ \sqrt{2}\sqrt{\frac{g_m}{R_5(4C_2C_5+C_2C_L+C_5C_L)}} \\ \text{bandwidth:} \ \frac{4C_2+2C_5R_5g_m+C_LR_5g_m+C_L}{R_5(4C_2C_5+C_2C_L+C_5C_L)} \\ \text{K-LP:} \ \frac{R_5g_m-1}{2g_m} \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_5(C_2-C_5)}{4C_2+2C_5R_5g_m+C_LR_5g_m+C_L} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

# 8.11 INVALID-NUMER-11 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$

$$H(s) = \frac{R_L \left( C_2 R_5 s - C_5 R_5 s + R_5 g_m - 1 \right)}{4 C_2 C_5 R_5 R_L s^2 + C_2 C_L R_5 R_L s^2 + C_2 R_5 s + 4 C_2 R_L s + C_5 C_L R_5 R_L s^2 + 2 C_5 R_5 R_L g_m s + C_5 R_5 s + C_L R_5 R_L g_m s + C_L R_L s + R_5 g_m + 2 R_L g_m + 1}$$

$$\begin{array}{l} \text{Q:} \ \frac{R_5R_L\sqrt{\frac{R_5g_m+2R_Lg_m+1}{R_5R_L(4C_2C_5+C_2C_L+C_5C_L)}}(4C_2C_5+C_2C_L+C_5C_L)}{C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5}R_5+C_LR_5R_Lg_m+C_LR_L} \\ \text{wo:} \ \sqrt{\frac{R_5g_m+2R_Lg_m+1}{R_5R_L(4C_2C_5+C_2C_L+C_5C_L)}} \\ \text{bandwidth:} \ \frac{C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5R_5+C_LR_5R_Lg_m+C_LR_L}{R_5R_L(4C_2C_5+C_2C_L+C_5C_L)} \\ \text{K-LP:} \ \frac{R_L(R_5g_m-1)}{R_5g_m+2R_Lg_m+1} \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_5R_L(C_2-C_5)}{C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5R_5+C_LR_5R_Lg_m+C_LR_L} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

8.12 INVALID-NUMER-12 
$$Z(s) = \left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, R_5, \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5}{C_2 C_L R_2 R_5 s^2 + 4 C_2 R_2 s + C_L R_2 R_5 g_m s + C_L R_2 s + C_L R_5 s + 2 R_2 g_m + 4}$$

$$\begin{array}{l} \text{Q: } \frac{\sqrt{2}C_{2}C_{L}R_{2}R_{5}\sqrt{\frac{R_{2}g_{m}+2}{C_{2}C_{L}R_{2}R_{5}}}}{4C_{2}R_{2}+C_{L}R_{2}R_{5}g_{m}+C_{L}R_{2}+C_{L}R_{5}}\\ \text{wo: } \sqrt{2}\sqrt{\frac{R_{2}g_{m}+2}{C_{2}C_{L}R_{2}R_{5}}}\\ \text{bandwidth: } \frac{4C_{2}R_{2}+C_{L}R_{2}R_{5}g_{m}+C_{L}R_{2}+C_{L}R_{5}}{C_{2}C_{L}R_{2}R_{5}}\\ \text{K-LP: } \frac{R_{2}R_{5}g_{m}-R_{2}+R_{5}}{2(R_{2}g_{m}+2)}\\ \text{K-HP: 0}\\ \text{K-BP: } \frac{C_{2}R_{2}R_{5}}{4C_{2}R_{2}+C_{L}R_{2}R_{5}g_{m}+C_{L}R_{2}+C_{L}R_{5}}\\ \text{Qz: 0}\\ \text{Wz: None} \end{array}$$

# 8.13 INVALID-NUMER-13 $Z(s) = \left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, R_5, \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{R_L \left( C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5 \right)}{C_2 C_L R_2 R_5 R_L s^2 + C_2 R_2 R_5 s + 4 C_2 R_2 R_L s + C_L R_2 R_5 R_L g_m s + C_L R_2 R_L s + C_L R_5 R_L s + R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L R_5 R_L s + R_2 R_5 R_L s +$$

8.14 INVALID-NUMER-14 
$$Z(s) = \left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{1}{C_5s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 R_2 s - C_5 R_2 s + R_2 g_m + 1 \right)}{4 C_2 C_5 R_2 R_L s^2 + C_2 R_2 s + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + 4 C_5 R_L s + R_2 g_m + 1}$$

Q: 
$$\frac{2C_2C_5R_2R_L\sqrt{\frac{R_2g_m+1}{C_2C_5R_2R_L}}}{C_2R_2+2C_5R_2R_Lg_m+C_5R_2+4C_5R_L}$$
 wo: 
$$\frac{\sqrt{\frac{R_2g_m+1}{C_2C_5R_2R_L}}}{2}$$
 bandwidth: 
$$\frac{C_2R_2+2C_5R_2R_Lg_m+C_5R_2+4C_5R_L}{4C_2C_5R_2R_L}$$
 K-LP:  $R_L$  K-HP: 0 
K-BP: 
$$\frac{R_2R_L(C_2-C_5)}{C_2R_2+2C_5R_2R_Lg_m+C_5R_2+4C_5R_L}$$
 Qz: 0 
Wz: None

# 8.15 INVALID-NUMER-15 $Z(s) = \left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, \frac{1}{C_5s}, \frac{R_L}{C_LR_Ls+1}\right)$

$$H(s) = \frac{R_L \left( C_2 R_2 s - C_5 R_2 s + R_2 g_m + 1 \right)}{4 C_2 C_5 R_2 R_L s^2 + C_2 C_L R_2 R_L s^2 + C_2 R_2 s + C_5 C_L R_2 R_L s^2 + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + 4 C_5 R_L s + C_L R_2 R_L g_m s + C_L R_L s + R_2 g_m + 1}$$

$$\begin{array}{l} \text{Q:} & \frac{R_2R_L\sqrt{\frac{R_2g_m+1}{R_2R_L(4C_2C_5+C_2C_L+C_5C_L)}}}{C_2R_2+2C_5R_2R_Lg_m+C_5R_2+4C_5R_L+C_LR_2R_Lg_m+C_LR_L} \\ \text{wo:} & \sqrt{\frac{R_2g_m+1}{R_2R_L(4C_2C_5+C_2C_L+C_5C_L)}} \\ \text{bandwidth:} & \frac{C_2R_2+2C_5R_2R_Lg_m+C_5R_2+4C_5R_L+C_LR_2R_Lg_m+C_LR_L}{R_2R_L(4C_2C_5+C_2C_L+C_5C_L)} \\ \text{K-LP:} & R_L \\ \text{K-HP:} & 0 \\ \text{K-BP:} & \frac{R_2R_L(C_2-C_5)}{C_2R_2+2C_5R_2R_Lg_m+C_5R_2+4C_5R_L+C_LR_2R_Lg_m+C_LR_L} \\ \text{Qz:} & 0 \\ \text{Wz:} & \text{None} \end{array}$$

**8.16** INVALID-NUMER-16 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$$

Q: 
$$\frac{2C_2C_5R_2R_5R_L\sqrt{\frac{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}{C_2C_5R_2R_5R_L}}}{\frac{C_2R_2R_5+4C_2R_2R_L+2C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L}{C_2C_5R_2R_5R_L}}$$
 wo: 
$$\frac{\sqrt{\frac{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}{C_2C_5R_2R_5R_L}}}{\frac{C_2R_2R_5+4C_2R_2R_L+2C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L}{4C_2C_5R_2R_5R_L}}$$
 bandwidth: 
$$\frac{C_2R_2R_5+4C_2R_2R_L+2C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L}{4C_2C_5R_2R_5R_L}}{\frac{R_L(R_2R_5g_m-R_2+R_5)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}}$$
 K-HP: 
$$0$$
 K-BP: 
$$\frac{R_2R_5g_m+2R_2R_Lg_m+C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L}{C_2R_2R_5+4C_2R_2R_L+2C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L}}$$
 Qz: 
$$0$$
 Wz: None

# 8.17 INVALID-NUMER-17 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_2R_2R_5s - C_5R_2R_5s + R_2R_5g_m - R_2 + R_5}{4C_2C_5R_2R_5s^2 + C_2C_LR_2R_5s^2 + 4C_2R_2s + C_5C_LR_2R_5s^2 + 2C_5R_2R_5g_ms + 4C_5R_5s + C_LR_2R_5g_ms + C_LR_2s + C_LR_5s + 2R_2g_m + 4C_5R_5s + C_LR_2R_5g_ms + C_LR_2s +$$

$$\begin{array}{l} \text{Q:} \ \frac{\sqrt{2}R_2R_5\sqrt{\frac{R_2g_m+2}{R_2R_5\{4C_2C_5+C_2C_L+C_5C_L\}}}}{4C_2R_2+2C_5R_2R_5g_m+4C_5R_5+C_LR_2R_5g_m+C_LR_2+C_LR_5} \\ \text{Wo:} \ \sqrt{2}\sqrt{\frac{R_2g_m+2}{R_2R_5(4C_2C_5+C_2C_L+C_5C_L)}} \\ \text{bandwidth:} \ \frac{4C_2R_2+2C_5R_2R_5g_m+4C_5R_5+C_LR_2R_5g_m+C_LR_2+C_LR_5}{R_2R_5(4C_2C_5+C_2C_L+C_5C_L)} \\ \text{K-LP:} \ \frac{R_2R_5g_m-R_2+R_5}{2(R_2g_m+2)} \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{R_2R_5(C_2-C_5)}{4C_2R_2+2C_5R_2R_5g_m+4C_5R_5+C_LR_2R_5g_m+C_LR_2+C_LR_5} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

**8.18** INVALID-NUMER-18 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 R_2 R_5 s - C_5 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5 \right)}{4 C_2 C_5 R_2 R_5 R_L s^2 + C_2 C_L R_2 R_5 R_L s^2 + C_2 R_2 R_5 s + 4 C_2 R_2 R_L s + C_5 C_L R_2 R_5 R_L s^2 + 2 C_5 R_2 R_5 R_L g_m s + C_5 R_2 R_5 s + 4 C_5 R_5 R_L s + C_L R_2 R_5 R_L s + C_L R_5 R_L s$$

$$\begin{array}{c} R_2R_5R_L\sqrt{\frac{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}{R_2R_5R_L(4C_2C_5+C_2C_L+C_5C_L)}}}(4C_2C_5+C_2C_L+C_5C_L)\\ Q\colon \frac{1}{C_2R_2R_5+4C_2R_2R_L+2C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L+C_LR_2R_5R_Lg_m+C_LR_2R_L+C_LR_5R_L}\\ \text{wo: } \sqrt{\frac{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}{R_2R_5R_L(4C_2C_5+C_2C_L+C_5C_L)}}\\ \text{bandwidth: } \frac{C_2R_2R_5+4C_2R_2R_L+2C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L+C_LR_2R_5R_Lg_m+C_LR_2R_L+C_LR_5R_L}{R_2R_5R_L(4C_2C_5+C_2C_L+C_5C_L)}\\ \text{K-LP: } \frac{R_L(R_2R_5g_m-R_2+R_5)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L}\\ \text{K-HP: 0} \\ \text{K-BP: } \frac{R_2R_5R_L(C_2-C_5)}{C_2R_2R_5+4C_2R_2R_L+2C_5R_2R_5R_Lg_m+C_5R_2R_5+4C_5R_5R_L+C_LR_2R_5R_Lg_m+C_LR_2R_L+C_LR_5R_L}\\ \text{Qz: 0}\\ \text{Wz: None} \end{array}$$

# **8.19** INVALID-NUMER-19 $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{1}{C_L s}\right)$

$$H(s) = \frac{C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1}{C_2 C_L R_2 R_5 g_m s^2 + C_2 C_L R_2 s^2 + C_2 C_L R_5 s^2 + 2 C_2 R_2 g_m s + 4 C_2 s + C_L R_5 g_m s + C_L s + 2 g_m}$$

#### Parameters:

$$\begin{array}{l} \text{Q:} \ \frac{\sqrt{2}C_{2}C_{L}\sqrt{\frac{g_{m}}{C_{2}C_{L}(R_{2}R_{5}g_{m}+R_{2}+R_{5})}}(R_{2}R_{5}g_{m}+R_{2}+R_{5})}{2C_{2}R_{2}g_{m}+4C_{2}+C_{L}R_{5}g_{m}+C_{L}} \\ \text{wo:} \ \sqrt{2}\sqrt{\frac{g_{m}}{C_{2}C_{L}(R_{2}R_{5}g_{m}+R_{2}+R_{5})}} \\ \text{bandwidth:} \ \frac{2C_{2}R_{2}g_{m}+4C_{2}+C_{L}R_{5}g_{m}+C_{L}}{C_{2}C_{L}(R_{2}R_{5}g_{m}+R_{2}+R_{5})} \\ \text{K-LP:} \ \frac{R_{5}g_{m}-1}{2g_{m}} \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{C_{2}(R_{2}R_{5}g_{m}-R_{2}+R_{5})}{2C_{2}R_{2}g_{m}+4C_{2}+C_{L}R_{5}g_{m}+C_{L}} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

8.20 INVALID-NUMER-20  $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1}\right)$ 

$$\begin{array}{l} \text{Q:} \ \frac{C_2C_LR_L\sqrt{\frac{R_5g_m+2R_Lg_m+1}{C_2C_LR_L(R_2R_5g_m+R_2+R_5)}}(R_2R_5g_m+R_2+R_5)}{C_2R_2R_5g_m+2C_2R_2R_Lg_m+C_2R_2+C_2R_5+4C_2R_L+C_LR_5R_Lg_m+C_LR_L} \\ \text{wo:} \ \sqrt{\frac{R_5g_m+2R_Lg_m+1}{C_2C_LR_L(R_2R_5g_m+R_2+R_5)}} \\ \text{bandwidth:} \ \frac{C_2R_2R_5g_m+2C_2R_2R_Lg_m+C_2R_2+C_2R_5+4C_2R_L+C_LR_5R_Lg_m+C_LR_L}{C_2C_LR_L(R_2R_5g_m+R_2+R_5)} \\ \text{K-LP:} \ \frac{R_L(R_5g_m-1)}{R_5g_m+2R_Lg_m+1} \\ \text{K-HP:} \ 0 \\ \text{K-BP:} \ \frac{C_2R_L(R_2R_5g_m-R_2+R_5)}{C_2R_2R_5g_m+2C_2R_2R_Lg_m+C_2R_2+C_2R_5+4C_2R_L+C_LR_5R_Lg_m+C_LR_L} \\ \text{Qz:} \ 0 \\ \text{Wz:} \ \text{None} \end{array}$$

## 9 INVALID-WZ

**9.1** INVALID-WZ-1 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L R_L s + 1\right) \left(C_5 R_2 R_5 s - R_2 R_5 g_m + R_2 - R_5\right)}{2C_5 C_L R_2 R_5 R_L g_m s^2 + C_5 C_L R_2 R_5 s^2 + 4C_5 C_L R_5 R_L s^2 + 2C_5 R_2 R_5 g_m s + 4C_5 R_5 s + C_L R_2 R_5 g_m s + 2C_L R_2 R_L g_m s + C_L R_2 s + C_L R_5 s + 4C_L R_L s + 2R_2 g_m + 4C_L R_2 R_5 g_m s + 2C_L R_2$$

$$Q \colon \frac{\sqrt{2}C_5C_LR_5\sqrt{\frac{R_2g_m+2}{C_5C_LR_5(2R_Lg_m+R_2+4R_L)}}}{2C_5R_2R_5g_m+4C_5R_5+C_LR_2R_5g_m+2C_LR_2R_Lg_m+C_LR_2+C_LR_5+4C_LR_L}}$$

$$Wo: \sqrt{2}\sqrt{\frac{R_2g_m+2}{C_5C_LR_5(2R_2R_Lg_m+R_2+4R_L)}}$$
bandwidth: 
$$\frac{2C_5R_2R_5g_m+4C_5R_5+C_LR_2R_5g_m+2C_LR_2R_Lg_m+C_LR_2+C_LR_5+4C_LR_L}{C_5C_LR_5(2R_2R_Lg_m+R_2+4R_L)}}$$

$$K-LP: \frac{R_2R_5g_m-R_2+R_5}{2(R_2g_m+2)}$$

$$K-HP: -\frac{R_2R_L}{2R_2R_Lg_m+R_2+4R_L}$$

$$K-BP: \frac{-C_5R_2R_5+C_LR_2R_5R_Lg_m-C_LR_2R_L+C_LR_5R_L}{2C_5C_LR_2R_5g_m+2C_LR_2R_Lg_m+C_LR_2+C_LR_5+4C_LR_L}}$$

$$Qz: \frac{\sqrt{2}C_5C_LR_2R_5R_L\sqrt{\frac{R_2g_m+2}{C_5C_LR_2R_5(2R_Lg_m+R_2+4R_L)}}}{C_5C_LR_2R_5g_m+C_LR_2R_L-C_LR_5R_L}}$$

$$Wz: \sqrt{\frac{-R_2R_5g_m+R_2-R_5}{C_5C_LR_2R_5g_m+R_2-R_5}}$$

9.2 INVALID-WZ-2 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L R_5 s^2 + 4 C_2 C_L R_L s^2 + 4 C_2 s + C_L R_5 g_m s + 2 C_L R_L g_m s + C_L s + 2 g_m}$$

$$\begin{aligned} & \text{Q:} \ \frac{\sqrt{2}C_2C_L\sqrt{\frac{g_m}{C_2C_L(R_5+4R_L)}}(R_5+4R_L)}{4C_2+C_LR_5g_m+2C_LR_Lg_m+C_L} \\ & \text{wo:} \ \sqrt{2}\sqrt{\frac{g_m}{C_2C_L(R_5+4R_L)}} \\ & \text{bandwidth:} \ \frac{4C_2+C_LR_5g_m+2C_LR_Lg_m+C_L}{C_2C_L(R_5+4R_L)} \\ & \text{K-LP:} \ \frac{R_5g_m-1}{2g_m} \\ & \text{K-HP:} \ \frac{R_5R_L}{R_5+4R_L} \\ & \text{K-BP:} \ \frac{C_2R_5+C_LR_5R_Lg_m-C_LR_L}{4C_2+C_LR_5g_m+2C_LR_Lg_m+C_L} \\ & \text{Qz:} \ \frac{\sqrt{2}C_2C_LR_5R_L}{C_2R_5+C_LR_5R_Lg_m-C_LR_L} \\ & \text{Wz:} \ \sqrt{\frac{R_5g_m-1}{C_2C_LR_5R_L}} \end{aligned}$$

# 9.3 INVALID-WZ-3 $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L\right)$

$$H(s) = \frac{R_L \left( C_2 C_5 R_5 s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_L s^2 + C_2 s + C_5 R_5 g_m s + 2 C_5 R_L g_m s + C_5 s + g_m}$$

$$\begin{aligned} &\text{Q:} \ \frac{C_2C_5\sqrt{\frac{g_m}{C_2C_5(R_5+4R_L)}}(R_5+4R_L)}{C_2+C_5R_5g_m+2C_5R_Lg_m+C_5} \\ &\text{wo:} \ \sqrt{\frac{g_m}{C_2C_5(R_5+4R_L)}} \\ &\text{bandwidth:} \ \frac{C_2+C_5R_5g_m+2C_5R_Lg_m+C_5}{C_2C_5(R_5+4R_L)} \\ &\text{K-LP:} \ R_L \\ &\text{K-HP:} \ \frac{R_5R_L}{R_5+4R_L} \\ &\text{K-BP:} \ \frac{R_L(C_2+C_5R_5g_m-C_5)}{C_2+C_5R_5g_m+2C_5R_Lg_m+C_5} \\ &\text{Qz:} \ \frac{C_2C_5R_5\sqrt{\frac{g_m}{C_2C_5(R_5+4R_L)}}}{C_2+C_5R_5g_m-C_5} \end{aligned}$$

Wz: 
$$\sqrt{\frac{g_m}{C_2C_5R_5}}$$

**9.4** INVALID-WZ-4 
$$Z(s) = \left(\infty, \frac{R_2}{C_2R_2s+1}, \infty, \infty, R_5, R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5\right)}{C_2 C_L R_2 R_5 s^2 + 4 C_2 C_L R_2 R_L s^2 + 4 C_2 R_2 s + C_L R_2 R_5 g_m s + 2 C_L R_2 R_L g_m s + C_L R_2 s + C_L R_5 s + 4 C_L R_L s + 2 R_2 g_m + 4 C_L R_2 g_m s + C_L R_2 g_m s + C_L R_3 g_$$

$$\begin{array}{c} \sqrt{2}C_{2}C_{L}R_{2}\sqrt{\frac{R_{2}g_{m}+2}{C_{2}C_{L}R_{2}(R_{5}+4R_{L})}}}(R_{5}+4R_{L}) \\ Q \colon \frac{1}{4C_{2}R_{2}+C_{L}R_{2}R_{5}g_{m}+2C_{L}R_{2}}R_{L}g_{m}+C_{L}R_{2}+C_{L}R_{5}+4C_{L}R_{L}} \\ wo \colon \sqrt{2}\sqrt{\frac{R_{2}g_{m}+2}{C_{2}C_{L}R_{2}(R_{5}+4R_{L})}} \\ bandwidth \colon \frac{4C_{2}R_{2}+C_{L}R_{2}R_{5}g_{m}+2C_{L}R_{2}R_{L}g_{m}+C_{L}R_{2}+C_{L}R_{5}+4C_{L}R_{L}}{C_{2}C_{L}R_{2}(R_{5}+4R_{L})} \\ K-LP \colon \frac{R_{2}R_{5}g_{m}-R_{2}+R_{5}}{2(R_{2}g_{m}+2)} \\ K-HP \colon \frac{R_{5}R_{L}}{R_{5}+4R_{L}} \\ K-BP \colon \frac{C_{2}R_{2}R_{5}+C_{L}R_{2}R_{5}R_{L}g_{m}-C_{L}R_{2}R_{L}+C_{L}R_{5}R_{L}}{4C_{2}R_{2}+C_{L}R_{2}R_{5}g_{m}+2C_{L}R_{2}R_{L}g_{m}+C_{L}R_{2}+C_{L}R_{5}+4C_{L}R_{L}} \\ Qz \colon \frac{\sqrt{2}C_{2}C_{L}R_{2}R_{5}R_{L}\sqrt{\frac{R_{2}g_{m}+2}{C_{2}C_{L}R_{2}(R_{5}+4R_{L})}}}{C_{2}R_{2}R_{5}R_{L}-C_{L}R_{2}R_{5}R_{L}} \\ Wz \colon \sqrt{\frac{R_{2}R_{5}g_{m}-R_{2}+R_{5}}{C_{2}C_{L}R_{2}R_{5}R_{L}}} \\ \end{array}$$

# **9.5** INVALID-WZ-5 $Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L\right)$

$$H(s) = \frac{R_L \left( C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1 \right)}{C_2 C_5 R_2 R_5 s^2 + 4 C_2 C_5 R_2 R_L s^2 + C_2 R_2 s + C_5 R_2 R_5 g_m s + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + C_5 R_5 s + 4 C_5 R_L s + R_2 g_m + 1}$$

$$\begin{array}{c} C_2C_5R_2\sqrt{\frac{R_2g_m+1}{C_2C_5R_2(R_5+4R_L)}}(R_5+4R_L)\\ \text{Q: } \frac{C_2R_2+C_5R_2R_5g_m+2C_5R_2R_Lg_m+C_5R_2+C_5R_5+4C_5R_L}{C_2C_5R_2(R_5+4R_L)}\\ \text{wo: } \sqrt{\frac{R_2g_m+1}{C_2C_5R_2(R_5+4R_L)}}\\ \text{bandwidth: } \frac{C_2R_2+C_5R_2R_5g_m+2C_5R_2R_Lg_m+C_5R_2+C_5R_5+4C_5R_L}{C_2C_5R_2(R_5+4R_L)}\\ \text{K-LP: } R_L \end{array}$$

$$\begin{aligned} & \text{K-HP: } \frac{R_5 R_L}{R_5 + 4 R_L} \\ & \text{K-BP: } \frac{R_L (C_2 R_2 + C_5 R_2 R_5 g_m - C_5 R_2 + C_5 R_5)}{C_2 R_2 + C_5 R_5 g_m + 2 C_5 R_2 R_L g_m + C_5 R_2 + C_5 R_5 + 4 C_5 R_L} \\ & \text{Qz: } \frac{C_2 C_5 R_2 R_5 \sqrt{\frac{R_2 g_m + 1}{C_2 C_5 R_2 (R_5 + 4 R_L)}}}{C_2 R_2 + C_5 R_2 R_5 g_m - C_5 R_2 + C_5 R_5} \\ & \text{Wz: } \sqrt{\frac{R_2 g_m + 1}{C_2 C_5 R_2 R_5}} \end{aligned}$$

# **9.6** INVALID-WZ-6 $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, R_L + \frac{1}{C_L s}\right)$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L R_2 R_5 g_m s^2 + 2 C_2 C_L R_2 R_2 g_m s^2 + C_2 C_L R_2 s^2 + C_2 C_L R_5 s^2 + 4 C_2 C_L R_L s^2 + 2 C_2 R_2 g_m s + 4 C_2 s + C_L R_5 g_m s + 2 C_L R_L g_m s + C_L s + 2 g_m r^2 + 2 C_2 R_2 g_m s^2 + 2 C_2 R_2 g_m s + 2 C_2 R_2 g_m s$$

#### Parameters:

$$Q \colon \frac{\sqrt{2}C_2C_L\sqrt{\frac{g_m}{C_2C_L(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)}}(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)}{2C_2R_2g_m+4C_2+C_LR_5g_m+2C_LR_Lg_m+C_L} \\ \text{wo: } \sqrt{2}\sqrt{\frac{g_m}{C_2C_L(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)}} \\ \text{bandwidth: } \frac{2C_2R_2g_m+4C_2+C_LR_5g_m+2C_LR_Lg_m+C_L}{C_2C_L(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)} \\ \text{K-LP: } \frac{R_5g_m-1}{2g_m} \\ \text{K-HP: } \frac{R_L(R_2R_5g_m-R_2+R_5)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L} \\ \text{K-BP: } \frac{C_2R_2R_5g_m-C_2R_2+C_2R_5+C_LR_5R_Lg_m-C_LR_L}{2C_2R_2g_m+4C_2+C_LR_5g_m+2C_LR_Lg_m+C_L} \\ \text{Qz: } \frac{\sqrt{2}C_2C_LR_L\sqrt{\frac{C_2C_L(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)}}(R_2R_5g_m-R_2+R_5)}{C_2R_2R_5g_m-C_2R_2+C_2R_5+C_LR_5R_Lg_m-C_LR_L} \\ \text{Wz: } \sqrt{\frac{R_5g_m-1}{C_2C_LR_L(R_2R_5g_m-R_2+R_5)}} \\ \end{aligned}$$

9.7 INVALID-WZ-7 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s - C_5 s + g_m \right)}{2C_2 C_5 R_2 R_L g_m s^2 + C_2 C_5 R_2 s^2 + 4C_2 C_5 R_L s^2 + C_2 R_2 g_m s + C_2 s + 2C_5 R_L g_m s + C_5 s + g_m}$$

$$\text{Q: } \frac{C_2C_5\sqrt{\frac{g_m}{C_2C_5\left(2R_2R_Lg_m+R_2+4R_L\right)}}(2R_2R_Lg_m+R_2+4R_L)}{C_2R_2g_m+C_2+2C_5R_Lg_m+C_5}$$

$$\begin{array}{l} \text{wo: } \sqrt{\frac{g_m}{C_2C_5(2R_2R_Lg_m+R_2+4R_L)}} \\ \text{bandwidth: } \frac{C_2R_2g_m+C_2+2C_5R_Lg_m+C_5}{C_2C_5(2R_2R_Lg_m+R_2+4R_L)} \\ \text{K-LP: } R_L \\ \text{K-HP: } -\frac{R_2R_L}{2R_2R_Lg_m+R_2+4R_L} \\ \text{K-BP: } \frac{R_L(C_2R_2g_m+C_2-C_5)}{C_2R_2g_m+C_2+2C_5R_Lg_m+C_5} \\ \text{Qz: } -\frac{C_2C_5R_2}{C_2R_2g_m+C_2+2C_5R_Lg_m+R_2+4R_L)} \\ \text{Qz: } \sqrt{-\frac{g_m}{C_2C_5(2R_2R_Lg_m+R_2+4R_L)}} \\ \text{Wz: } \sqrt{-\frac{g_m}{C_2C_5R_2}} \end{array}$$

**9.8** INVALID-WZ-8  $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$ 

$$H(s) = \frac{R_L \left( -C_2 C_5 R_2 R_5 s^2 + C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s - C_5 R_5 s + R_5 g_m - 1 \right)}{2 C_2 C_5 R_2 R_5 R_L g_m s^2 + C_2 C_5 R_2 R_5 s^2 + 4 C_2 C_5 R_5 R_L s^2 + C_2 R_2 R_5 g_m s + 2 C_2 R_2 R_L g_m s + C_2 R_2 s + C_2 R_5 s + 4 C_2 R_L s + 2 C_5 R_5 R_L g_m s + C_5 R_5 s + R_5 g_m + 2 R_L g_m + 1 C_5 R_5 R_L g_m s + C_5 R_5 R_L g_m s$$

#### **Parameters:**

$$\begin{array}{l} Q\colon \frac{C_2C_5R_5\sqrt{\frac{R_5g_m+2R_Lg_m+1}{C_2C_5R_5(2R_2R_Lg_m+R_2+4R_L)}}(2R_2R_Lg_m+R_2+4R_L)}{C_2R_2R_5g_m+2C_2R_2R_Lg_m+C_2R_2+C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5R_5}\\ \text{wo: }\sqrt{\frac{R_5g_m+2R_Lg_m+1}{C_2C_5R_5(2R_2R_Lg_m+R_2+4R_L)}}\\ \text{bandwidth: }\frac{C_2R_2R_5g_m+2C_2R_2R_Lg_m+C_2R_2+C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5R_5}{C_2C_5R_5(2R_2R_Lg_m+R_2+4R_L)}\\ \text{K-LP: }\frac{R_L(R_5g_m-1)}{R_5g_m+2R_Lg_m+1}\\ \text{K-HP: }-\frac{R_2R_L}{2R_2R_2g_m+R_2+4R_L}\\ \text{K-BP: }\frac{R_L(C_2R_2R_5g_m-C_2R_2+C_2R_5-C_5R_5)}{C_2R_2R_5g_m+2C_2R_2R_Lg_m+C_2R_2+C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5R_5}\\ \text{Qz: }-\frac{C_2C_5R_2R_5}{C_2R_2R_5g_m-C_2R_2+C_2R_5+4C_2R_L+2C_5R_5R_Lg_m+C_5R_5}\\ \text{Wz: }\sqrt{\frac{R_5g_m+2R_Lg_m+1}{C_2C_5R_5g_m-C_2R_2+C_2R_5-C_5R_5}}\\ \end{array}$$

**9.9** INVALID-WZ-9  $Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L\right)$ 

$$H(s) = \frac{R_L \left( C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 R_2 g_m s + C_2 s + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 R_2 R_5 g_m s^2 + 2 C_2 C_5 R_2 R_L g_m s^2 + C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_L s^2 + C_2 R_2 g_m s + C_2 s + C_5 R_5 g_m s + 2 C_5 R_L g_m s + C_5 s + g_m r^2 + 2 C_5 R_5 g_m s^2 + 2 C_$$

$$\begin{aligned} & \text{Q:} & \frac{C_2C_5\sqrt{\frac{g_m}{C_2C_5(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)}}(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)}{C_2R_2g_m+C_2+C_5R_5g_m+2C_5R_Lg_m+C_5} \\ & \text{wo:} & \sqrt{\frac{g_m}{C_2C_5(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)}} \\ & \text{bandwidth:} & \frac{C_2R_2g_m+C_2+C_5R_5g_m+2C_5R_Lg_m+C_5}{C_2C_5(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)} \\ & \text{K-LP:} & R_L \\ & \text{K-HP:} & \frac{R_L(R_2R_5g_m-R_2+R_5)}{R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L} \\ & \text{K-BP:} & \frac{R_L(C_2R_2g_m+C_2+C_5R_5g_m-C_5)}{C_2R_2g_m+C_2+C_5R_5g_m+C_5} \\ & \text{Qz:} & \frac{C_2C_5\sqrt{\frac{g_m}{C_2C_5(R_2R_5g_m+2R_2R_Lg_m+R_2+R_5+4R_L)}}(R_2R_5g_m-R_2+R_5)}{C_2R_2g_m+C_2+C_5R_5g_m-C_5} \\ & \text{Wz:} & \sqrt{\frac{g_m}{C_2C_5(R_2R_5g_m-R_2+R_5)}} \end{aligned}$$

## 10 INVALID-ORDER

10.1 INVALID-ORDER-1  $Z(s) = (\infty, R_2, \infty, \infty, R_5, R_L)$ 

$$H(s) = \frac{R_L (R_2 R_5 g_m - R_2 + R_5)}{R_2 R_5 g_m + 2R_2 R_L g_m + R_2 + R_5 + 4R_L}$$

10.2 INVALID-ORDER-2  $Z(s) = \left(\infty, R_2, \infty, \infty, R_5, \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{R_2 R_5 g_m - R_2 + R_5}{C_L R_2 R_5 g_m s + C_L R_2 s + C_L R_5 s + 2R_2 g_m + 4}$$

10.3 INVALID-ORDER-3  $Z(s) = \left(\infty, R_2, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1}\right)$ 

10.4 INVALID-ORDER-4 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(R_2 R_5 g_m - R_2 + R_5\right)}{C_L R_2 R_5 g_m s + 2C_L R_2 R_L g_m s + C_L R_2 s + C_L R_5 s + 4C_L R_L s + 2R_2 g_m + 4}$$

10.5 INVALID-ORDER-5 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_5 R_2 s + R_2 g_m + 1 \right)}{2C_5 R_2 R_L g_m s + C_5 R_2 s + 4C_5 R_L s + R_2 g_m + 1}$$

10.6 INVALID-ORDER-6 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_5 R_2 s + R_2 g_m + 1}{s \left( C_5 C_L R_2 s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m + C_L \right)}$$

10.7 INVALID-ORDER-7 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{(C_L R_L s + 1) (-C_5 R_2 s + R_2 g_m + 1)}{s (2C_5 C_L R_2 R_L g_m s + C_5 C_L R_2 s + 4C_5 C_L R_L s + 2C_5 R_2 g_m + 4C_5 + C_L R_2 g_m + C_L)}$$

10.8 INVALID-ORDER-8 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(-C_5 R_2 s + R_2 g_m + 1\right)}{s \left(2C_5 C_L L_L R_2 g_m s^2 + 4C_5 C_L L_L s^2 + C_5 C_L R_2 s + 2C_5 R_2 g_m + 4C_5 + C_L R_2 g_m + C_L\right)}$$

10.9 INVALID-ORDER-9 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_5 R_2 s + R_2 g_m + 1\right)}{C_5 C_L L_L R_2 s^3 + 2 C_5 L_L R_2 g_m s^2 + 4 C_5 L_L s^2 + C_5 R_2 s + C_L L_L R_2 g_m s^2 + C_L L_L s^2 + R_2 g_m + 1}$$

10.10 INVALID-ORDER-10 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(-C_5R_2s + R_2g_m + 1\right)\left(C_LL_Ls^2 + C_LR_Ls + 1\right)}{s\left(2C_5C_LL_LR_2g_ms^2 + 4C_5C_LL_Ls^2 + 2C_5C_LR_2R_Lg_ms + C_5C_LR_2s + 4C_5C_LR_Ls + 2C_5R_2g_m + 4C_5 + C_LR_2g_m + C_L\right)}$$

10.11 INVALID-ORDER-11 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

10.12 INVALID-ORDER-12  $Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$ 

$$H(s) = \frac{\left(-C_5R_2s + R_2g_m + 1\right)\left(C_LL_LR_2s^2 + L_Ls + R_L\right)}{2C_5C_LL_LR_2g_ms^3 + C_5C_LL_LR_2s^3 + 4C_5C_LL_LR_2s^3 + 2C_5L_LR_2g_ms^2 + 4C_5L_Ls^2 + 2C_5R_2R_Lg_ms + C_5R_2s + 4C_5R_Ls + C_LL_LR_2g_ms^2 + C_LL_Ls^2 + R_2g_m + 1}{2C_5C_LL_LR_2s^3 + 4C_5C_LL_LR_2s^3 + 4C_5C_LL_LR_2s^3 + 2C_5L_LR_2g_ms^2 + 4C_5L_Ls^2 + 2C_5R_2R_Lg_ms + C_5R_2s + 4C_5R_Ls + C_LL_LR_2g_ms^2 + C_LL_Ls^2 + R_2g_m + 1}$$

10.13 INVALID-ORDER-13 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( -C_5 R_2 s + R_2 g_m + 1 \right)}{2C_5 C_L L_L R_2 R_L g_m s^3 + C_5 C_L L_L R_2 s^3 + 4C_5 C_L L_L R_2 s^3 + C_5 C_L R_2 R_L g_m s + C_5 R_2 R_L g_m s + C_5 R_2 s + 4C_5 R_L s + C_L L_L R_2 g_m s^2 + C_L L_L s^2 + C_L R_2 R_L g_m s + C_L R_L s + R_2 g_m s^2 + C_L R_2 R_L g_m s + C_L R_2 R_2 R_L g_m s + C_L R_2 R_L g_m s + C_L R_2 R_L g_m s + C_L R_2 R_2 R_L g_m s + C_L R_2 R_L g_m s + C_$$

10.14 INVALID-ORDER-14  $Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$ 

$$H(s) = \frac{R_L \left( -C_5 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5 \right)}{2C_5 R_2 R_5 R_L g_m s + C_5 R_2 R_5 s + 4C_5 R_5 R_L s + R_2 R_5 g_m + 2R_2 R_L g_m + R_2 + R_5 + 4R_L g_m s}$$

**10.15** INVALID-ORDER-15 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L L_L s^2 + 1\right) \left(C_5 R_2 R_5 s - R_2 R_5 g_m + R_2 - R_5\right)}{2C_5 C_L L_L R_2 R_5 g_m s^3 + 4C_5 C_L L_L R_5 s^3 + C_5 C_L R_2 R_5 s^2 + 2C_5 R_2 R_5 g_m s + 4C_5 R_5 s + 2C_L L_L R_2 g_m s^2 + 4C_L L_L s^2 + C_L R_2 R_5 g_m s + C_L R_2 s + C_L R_5 s + 2R_2 g_m + 4C_1 R_2 R_5 g_m s^2 + 4C_2 R_5 g_m s + C_2 R_5 g_m s$$

**10.16** INVALID-ORDER-16 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_5 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5\right)}{C_5 C_L L_L R_2 R_5 s^3 + 2 C_5 L_L R_2 R_5 g_m s^2 + 4 C_5 L_L R_5 s^2 + C_5 R_2 R_5 s + C_L L_L R_2 R_5 g_m s^2 + C_L L_L R_2 s^2 + C_L L_L R_5 s^2 + 2 L_L R_2 g_m s + 4 L_L s + R_2 R_5 g_m + R_2 + R_5}$$

**10.17** INVALID-ORDER-17 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_5 R_2 R_5 s - R_2 R_5 g_m + R_2 - R_5\right)}{2C_5 C_L L_L R_2 R_5 g_m s^3 + 4C_5 C_L L_L R_5 s^3 + 2C_5 C_L R_2 R_5 R_L g_m s^2 + C_5 C_L R_2 R_5 s^2 + 4C_5 C_L R_5 R_L s^2 + 2C_5 R_2 R_5 g_m s + 4C_5 R_5 s + 2C_L L_L R_2 g_m s^2 + 4C_L L_L s^2 + C_L R_2 R_5 g_m s + 4C_5 R_5 g_m s + 4C_5 R_5 g_m s^2 + 4C_5 R_5$$

10.18 INVALID-ORDER-18 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(-C_5 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5\right)}{C_5 C_L L_L R_2 R_5 R_L s^3 + 2 C_5 L_L R_2 R_5 R_L g_m s^2 + C_5 L_L R_2 R_5 s^2 + 4 C_5 L_L R_5 R_L s^2 + C_5 R_2 R_5 R_L s + C_L L_L R_2 R_5 R_L g_m s^2 + C_L L_L R_5 R_L s^2 + L_L R_2 R_5 g_m s + 2 L_L R_5 R_L s^2 + C_L R_5 R_L s$$

**10.19** INVALID-ORDER-19 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{\left(C_{L}L_{L}R_{2}s^{2} + L_{L}s + R_{L}\right)\left(C_{5}R_{2}R_{5}s - R_{2}R_{5}g_{m} + R_{2}R_{5}R_{L}g_{m}s^{2} + C_{5}L_{L}R_{2}R_{5}g_{m}s^{2} + C_{5}L_{L}R_{2}R_{5}g_{m}s^{2} + C_{5}L_{L}R_{5}s^{2} + C_{5}R_{2}R_{5}R_{L}g_{m}s + C_{5}R_{2}R_{5}s + C_{L}L_{L}R_{2}R_{5}g_{m}s^{2} + C_{5}L_{L}R_{2}R_{5}g_{m}s^{2} + C_{5}L_{L}R_{2}R_{2}g_{m}s^{2} + C_{5}L_{L}R_{2}R_{2}g_{m}s^{2} + C_{5}L_{L}R_{2}g_{m}s^{2} + C_{5}L_{L}R_$$

10.20 INVALID-ORDER-20 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

10.21 INVALID-ORDER-21 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1 \right)}{C_5 R_2 R_5 g_m s + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + C_5 R_5 s + 4 C_5 R_L s + R_2 g_m + 1}$$

**10.22** INVALID-ORDER-22 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1}{s \left( C_5 C_L R_2 R_5 g_m s + C_5 C_L R_2 s + C_5 C_L R_5 s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m + C_L \right)}$$

**10.23** INVALID-ORDER-23 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{s \left(C_5 C_L R_2 R_5 g_m s + 2 C_5 C_L R_2 R_L g_m s + C_5 C_L R_2 s + C_5 C_L R_5 s + 4 C_5 C_L R_L s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m + C_L\right)}$$

**10.24** INVALID-ORDER-24 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{s \left(2 C_5 C_L L_L R_2 g_m s^2 + 4 C_5 C_L L_L s^2 + C_5 C_L R_2 g_m s + C_5 C_L R_2 s + C_5 C_L R_5 s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m + C_L\right)}$$

**10.25** INVALID-ORDER-25 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{C_5 C_L L_L R_2 g_m s^3 + C_5 C_L L_L R_2 s^3 + C_5 C_L L_L R_5 s^3 + 2 C_5 L_L R_2 g_m s^2 + 4 C_5 L_L s^2 + C_5 R_2 R_5 g_m s + C_5 R_2 s + C_5 R_5 s + C_L L_L R_2 g_m s^2 + C_L L_L s^2 + R_2 g_m + 1}$$

**10.26** INVALID-ORDER-26 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{5}R_{2}R_{5}g_{m}s - C_{5}R_{2}s + C_{5}R_{5}s + R_{2}g_{m} + 1\right)}{s\left(2C_{5}C_{L}L_{L}R_{2}g_{m}s^{2} + 4C_{5}C_{L}L_{L}s^{2} + C_{5}C_{L}R_{2}g_{m}s + 2C_{5}C_{L}R_{2}g_{m}s + C_{5}C_{L}R_{2}s + C_{5}C_{L}R_{5}s + 4C_{5}C_{L}R_{L}s + 2C_{5}R_{2}g_{m} + 4C_{5} + C_{L}R_{2}g_{m} + C_{L}\right)}$$

10.27 INVALID-ORDER-27 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{C_5 C_L L_L R_2 R_5 R_L g_m s^3 + C_5 C_L L_L R_5 R_L s^3 + C_5 L_L R_2 R_5 g_m s^2 + 2 C_5 L_L R_2 R_2 R_2 g_m s^2 + C_5 L_L R_2 s^2 + C_5 L_L R_5 s^2 + 4 C_5 L_L R_2 s^2 + C_5 R_2 R_5 R_L g_m s + C_5 R_2 R_5 R_L g_m s^2 + C_5 R_2 R_L g_m s^2 + C_5 R_L g_m s^2 + C_5 R_L g_m s^2 + C_5 R_L g_$$

**10.28** INVALID-ORDER-28 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}R_{2}s^{2} + L_{L}s + R_{L}\right)\left(C_{5}R_{2}R_{5}g_{m}s - C_{5}R_{2}s + C_{5}R_{5}s + R_{2}g_{m} + 1\right)}{C_{5}C_{L}L_{L}R_{2}R_{5}g_{m}s^{3} + 2C_{5}C_{L}L_{L}R_{2}s^{3} + C_{5}C_{L}L_{L}R_{5}s^{3} + 4C_{5}C_{L}L_{L}R_{2}s^{3} + 2C_{5}L_{L}R_{2}g_{m}s^{2} + 4C_{5}L_{L}s^{2} + C_{5}R_{2}R_{5}g_{m}s + 2C_{5}R_{2}R_{5}g_{m}s + C_{5}R_{2}s + C_{5}R_$$

10.29 INVALID-ORDER-29 
$$Z(s) = \left(\infty, R_2, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1 \right)}{C_5 C_L L_L R_2 R_5 g_m s^3 + 2 C_5 C_L L_L R_2 g_m s^3 + C_5 C_L L_L R_2 s^3 + C_5 C_L L_L R_5 s^3 + 4 C_5 C_L L_L R_2 s^3 + C_5 C_L R_2 R_5 R_L g_m s^2 + C_5 C_L R_2 R_L s^2 + C_5 C_L R_2 R_5 g_m s + 2 C_5 R_2 R_5 g_m s^2 + C_5 C_L R_2 R_5 g_m s^3 + 2 C_5 C_L R_5 g_m s^3 + 2 C_5 C_L R_5 g_m s^3 + 2 C_5 C_L R_5 g_m s^3$$

10.30 INVALID-ORDER-30 
$$Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1}{s \left( C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_2 s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m + C_L \right)}$$

10.31 INVALID-ORDER-31  $Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$ 

$$H(s) = \frac{R_L \left( C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1 \right)}{C_5 C_L L_5 R_2 R_L g_m s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L R_2 R_L s^2 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + 4 C_5 R_L s + C_L R_2 R_L g_m s + C_L R_L s + R_2 g_m + 1}$$

**10.32** INVALID-ORDER-32  $Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1\right)}{s \left(C_5 C_L L_5 R_2 q_m s^2 + C_5 C_L L_5 s^2 + 2 C_5 C_L R_2 R_L q_m s + C_5 C_L R_2 s + 4 C_5 C_L R_L s + 2 C_5 R_2 q_m + 4 C_5 + C_L R_2 q_m + C_L\right)}$$

10.33 INVALID-ORDER-33  $Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1\right)}{s \left(C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L L_L R_2 g_m s^2 + 4 C_5 C_L L_L s^2 + C_5 C_L R_2 s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m + C_L\right)}$$

**10.34** INVALID-ORDER-34  $Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

$$H(s) = \frac{L_L s \left(C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1\right)}{C_5 C_L L_5 L_L R_2 g_m s^4 + C_5 C_L L_L L_2 s^4 + C_5 C_L L_L R_2 s^3 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + 2 C_5 L_L R_2 g_m s^2 + 4 C_5 L_L s^2 + C_5 R_2 s + C_L L_L R_2 g_m s^2 + C_L L_L s^2 + R_2 g_m + 1}$$

10.35 INVALID-ORDER-35  $Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ L_L s + R_L + \frac{1}{C_L s}\right)$ 

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1\right)}{s \left(C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L L_L R_2 g_m s^2 + 4 C_5 C_L L_L s^2 + 2 C_5 C_L R_2 R_L g_m s + C_5 C_L R_2 s + 4 C_5 C_L R_2 s + 4$$

**10.36** INVALID-ORDER-36 
$$Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1\right)}{C_5 C_L L_5 L_L R_2 g_m s^4 + C_5 C_L L_5 L_L R_2 s^4 + C_5 C_L L_L R_2 R_L s^3 + C_5 L_5 L_L R_3 s^3 + C_5 L_5 L_L s^3 + C_5 L_5 R_2 R_L g_m s^2 + C_5 L_5 R_L s^2 + 2 C_5 L_L R_2 R_L g_m s^2 + C_5 L_L R_2 R_L g_m s^2$$

**10.37** INVALID-ORDER-37 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}R_{L}s^{2} + L_{L}s + R_{L}\right)\left(C_{5}L_{5}R_{2}g_{m}s^{2} + C_{5}L_{5}s^{2} - C_{5}R_{2}s + R_{2}g_{m} + 1\right)}{C_{5}C_{L}L_{5}L_{L}R_{2}g_{m}s^{4} + C_{5}C_{L}L_{L}R_{2}R_{L}g_{m}s^{3} + C_{5}C_{L}L_{L}R_{2}s^{3} + 4C_{5}C_{L}L_{L}R_{L}s^{3} + C_{5}L_{5}R_{2}g_{m}s^{2} + C_{5}L_{5}s^{2} + 2C_{5}L_{L}R_{2}g_{m}s^{2} + 4C_{5}L_{L}s^{2} + 2C_{5}R_{2}R_{L}g_{m}s + C_{5}R_{2}R_{L}g_{m}s + C_{5}R_{2}R_{L}g_{m}s^{2} + C_{5}L_{5}R_{2}g_{m}s^{2} + C_{5}L_{5}R_{2$$

10.38 INVALID-ORDER-38 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1 \right) \left( C_5 L_5 L_L R_2 g_m s^3 + C_5 C_L L_5 L_L R_2 g_m s^3 + C_5 C_L L_L$$

**10.39** INVALID-ORDER-39 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_5L_5R_2s^2 + L_5R_2g_ms + L_5s - R_2}{C_5C_LL_5R_2s^3 + 2C_5L_5R_2g_ms^2 + 4C_5L_5s^2 + C_LL_5R_2g_ms^2 + C_LL_5s^2 + C_LR_2s + 2R_2g_m + 4C_5L_5s^2 + C_LL_5R_2g_ms^2 + C_LL_5s^2 + C_LR_2s + 2R_2g_m + 4C_5L_5s^2 + C_LL_5R_2g_ms^2 + C_LL_5s^2 +$$

**10.40** INVALID-ORDER-40 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

10.41 INVALID-ORDER-41 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L R_L s + 1\right) \left(C_5 L_5 R_2 s^2 - L_5 R_2 g_m s - L_5 s + R_2\right)}{2 C_5 C_L L_5 R_2 g_m s^3 + C_5 C_L L_5 R_2 s^3 + 4 C_5 C_L L_5 R_2 g_m s^2 + 2 C_5 L_5 R_2 g_m s^2 + 4 C_5 L_5 R_2 g_m s^2 + C_L L_5 R_2 g_m s^2 + C_L L_5 R_2 g_m s^2 + C_L R_2 R_L g_m s + C_L R_2 s + 4 C_L R_L s + 2 R_2 g_m + 4 C_L R_2 s + 4$$

**10.42** INVALID-ORDER-42 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L L_L s^2 + 1\right) \left(C_5 L_5 R_2 s^2 - L_5 R_2 g_m s - L_5 s + R_2\right)}{2C_5 C_L L_5 L_L R_2 g_m s^4 + 4C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_2 s^3 + 2C_5 L_5 R_2 g_m s^2 + 4C_5 L_5 s^2 + C_L L_5 R_2 g_m s^2 + C_L L_5 s^2 + 2C_L L_L R_2 g_m s^2 + 4C_L L_L s^2 + C_L R_2 s + 2R_2 g_m s + 4C_L L_L s^2 + C_L R_2 s + 2R_2 g_m s + 4C_L R_2 s + 4C_L R_$$

10.43 INVALID-ORDER-43 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_5 L_5 R_2 s^2 + L_5 R_2 g_m s + L_5 s - R_2\right)}{C_5 C_L L_5 L_L R_2 s^4 + 2 C_5 L_5 L_L R_2 g_m s^3 + 4 C_5 L_5 L_L s^3 + C_5 L_5 R_2 s^2 + C_L L_5 L_L R_2 g_m s^3 + C_L L_5 L_L R_2 s^3 + C_L L_L R_2 s^2 + L_5 R_2 g_m s + L_5 s + 2 L_L R_2 g_m s + 4 L_L s + R_2 R_2 g_m s^2 + 2 L_5 R_2 g_m s + L_5$$

**10.44** INVALID-ORDER-44 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_{5s}}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{5}L_{5}R_{2}s^{2} - L_{5}R_{2}g_{m}s - L_{5}s + R_{2}\right)}{2C_{5}C_{L}L_{5}L_{L}g_{m}s^{4} + 4C_{5}C_{L}L_{5}R_{2}R_{L}g_{m}s^{3} + C_{5}C_{L}L_{5}R_{2}s^{3} + 4C_{5}C_{L}L_{5}R_{2}g_{m}s^{2} + 4C_{5}L_{5}s^{2} + C_{L}L_{5}R_{2}g_{m}s^{2} + C_{L}L_{5}s^{2} + 2C_{L}L_{L}R_{2}g_{m}s^{2} + C_{L}L_{5}s^{2} + C_{L}L_{5}R_{2}g_{m}s^{2} + C_{L}L_{$$

10.45 INVALID-ORDER-45 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)$$

$$H(s) = \frac{L_L R_L s \left(-C_5 L_5 R_2 s^2 + L_5 R_2 g_m s + L_5 s - R_2\right)}{C_5 C_L L_5 L_L R_2 R_L s^4 + 2 C_5 L_5 L_L R_2 R_L g_m s^3 + C_5 L_5 L_L R_2 s^3 + 4 C_5 L_5 L_L R_2 s^3 + C_5 L_5 R_2 R_L s^2 + C_L L_5 L_L R_2 R_L g_m s^3 + C_L L_5 L_L R_2 R_L s^2 + L_5 L_L R_2 g_m s^2 + L_5 L$$

**10.46** INVALID-ORDER-46 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{\left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_5 L_5 R_2 s^2 - L_5 R_2 g_m s - L_5 R_2 g_m s^2 - L_5 R_2 g_m s^2 - L_5 R_2 g_m s^2 + C_5 L_5 L_4 R_2 g_m s^3 + 4 C_5 L_5 R_2 R_2 g_m s^3 + 4 C_5 L_$$

10.47 INVALID-ORDER-47 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = -\frac{R_L \left(C_L L_L s^2 + 1\right) \left(C_5 L_5 R_2 s^2 - L_5 R_2 g_m s - L_5 R_2 R_L g_m s^2 + C_5 L_5 L_L R_2 s^4 + 4 C_5 C_L L_5 L_L R_2 s^4 + 4 C_5 C_L L_5 L_L R_2 s^4 + 4 C_5 C_L L_5 L_L R_2 R_L g_m s^3 + 2 C_5 L_5 R_2 R_L g_m s^2 + C_5 L_5 R_2 s^2 + 4 C_5 L_5 R_2 s^2 + 4 C_5 L_5 L_L R_2 g_m s^3 + C_L L_5 L_L R_2 g_m s^3 + C_$$

**10.48** INVALID-ORDER-48 
$$Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1}{s \left( C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L L_5 s^2 + C_5 C_L R_2 R_5 g_m s + C_5 C_L R_2 s + C_5 C_L R_5 s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m + C_L \right)}$$

**10.49** INVALID-ORDER-49 
$$Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1 \right)}{C_5 C_L L_5 R_2 g_m s^3 + C_5 C_L L_5 R_L s^3 + C_5 C_L R_2 R_5 g_m s^2 + C_5 C_L R_5 R_L s^2 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + C_5 R_5 s + 2 C_5 R_2 g_m s^2 + C_5 R_2$$

**10.50** INVALID-ORDER-50 
$$Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{s \left(C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L R_2 R_5 g_m s + 2 C_5 C_L R_2 R_L g_m s + C_5 C_L R_2 s + C_5 C_L R_5 s + 4 C_5 C_L R_L s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m + C_L\right)}$$

10.51 INVALID-ORDER-51 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{s \left(C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L L_L R_2 g_m s^2 + 4 C_5 C_L L_L s^2 + C_5 C_L R_2 R_5 g_m s + C_5 C_L R_2 s + C_5 C_L R_5 s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m + C_L\right)}$$

10.52 INVALID-ORDER-52 
$$Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{C_5 C_L L_5 L_L R_2 g_m s^4 + C_5 C_L L_L R_2 R_5 g_m s^3 + C_5 C_L L_L R_2 s^3 + C_5 C_L L_L R_5 s^3 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + 2 C_5 L_L R_2 g_m s^2 + 4 C_5 L_L s^2 + C_5 R_2 g_m s + C_5 R_2 s^2 + C_5 R_2 g_m s^2 + C_5 R_2 g_m$$

**10.53** INVALID-ORDER-53 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{5}L_{5}R_{2}g_{m}s^{2} + C_{5}L_{5}s^{2} + C_{5}R_{2}R_{5}g_{m}s - C_{5}R_{2}s + C_{5}R_{5}s + R_{2}g_{m} + 1\right)}{s\left(C_{5}C_{L}L_{5}R_{2}g_{m}s^{2} + C_{5}C_{L}L_{L}R_{2}g_{m}s^{2} + 4C_{5}C_{L}L_{L}s^{2} + C_{5}C_{L}R_{2}R_{5}g_{m}s + 2C_{5}C_{L}R_{2}R_{L}g_{m}s + C_{5}C_{L}R_{2}s + 4C_{5}C_{L}R_{L}s + 2C_{5}R_{2}g_{m} + 4C_{5} + C_{L}R_{2}s + C_{5}C_{L}R_{2}s + C_{5}C_{L}R_{$$

10.54 INVALID-ORDER-54 
$$Z(s) = \left(\infty, R_2, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left( C_5 L_5 R_2 g_m s^2 + C_5 C_5 L_5 R_2 g_$$

10.55 INVALID-ORDER-55 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

**10.56** INVALID-ORDER-56 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_5 L_5 R_L R_2 R_L g_m s^3 + C_5 C_L L_5 R_L R_2 R_5 g_m s^3 + 2 C_5 C_L L_L R_2 R_5 g_m s^3 + C_5 C_L L_L R_2 s^$$

10.57 INVALID-ORDER-57 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_5L_5R_2R_5s^2 + L_5R_2R_5g_ms - L_5R_2s + L_5R_5s - R_2R_5}{C_5C_LL_5R_2R_5s^3 + 2C_5L_5R_2R_5g_ms^2 + 4C_5L_5R_2s^2 + C_LL_5R_2g_ms^2 + C_LL_5R_2s^2 + C_LL_$$

10.58 INVALID-ORDER-58 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$$

**10.59** INVALID-ORDER-59 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_{L}R_{L}s+1\right)\left(C_{5}L_{5}R_{2}R_{5}s^{2}-L_{5}R_{2}R_{5}g_{m}s+L_{5}R_{2}s-L_{5}R_{5}s+R_{2}R_{5}\right)}{2C_{5}C_{L}L_{5}R_{2}R_{5}g_{m}s^{3}+C_{5}C_{L}L_{5}R_{2}R_{5}s^{3}+4C_{5}C_{L}L_{5}R_{2}R_{5}g_{m}s^{2}+4C_{5}L_{5}R_{2}R_{5}g_{m}s^{2}+4C_{5}L_{5}R_{2}R_{5}g_{m}s^{2}+2C_{L}L_{5}R_{2}R_{2}g_{m}s^{2}+C_{L}L_{5}R_{2}s^{2}+C_{L}L_{5}R_{2}s^{2}+C_{L}L_{5}R_{5}s^{2}+4C_{5}L_{5}R_{5}s^{2}+C_{5}L_{5}R_{5}g_{m}s^{2}+C_{5}L_{5}R_{5}g_{m}s^{2}+C_{5}L_{5}R_{5}s$$

10.60 INVALID-ORDER-60 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ L_L s + \frac{1}{C_L s}\right)$$

10.61 INVALID-ORDER-61 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_5 L_5 R_2 R_5 s^2 + L_5 R_2 R_5 g_m s - L_5 R_2 s + L_5 R_5 s - R_2 R_5\right)}{C_5 C_L L_5 L_L R_2 R_5 s^4 + 2 C_5 L_5 L_L R_2 g_m s^3 + 4 C_5 L_5 L_L R_5 s^3 + C_5 L_5 R_2 R_5 s^2 + C_L L_5 L_L R_2 R_5 g_m s^3 + C_L L_5 L_L R_2 R_5 R_5 s^3 + C_L L_5 L_L R_2 R_5 R_5 r_5 + C_L L_5 L_L R_2 R_5 r_5 + C_L L_5 L_L R_5 r_5 + C$$

10.62 INVALID-ORDER-62 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L L_L s^2 + C_L R_L s + C_L L_L S_L R_L s^2 + C_L L_L S_L R_L R_L S_L R_L S_L$$

10.63 INVALID-ORDER-63 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(-C_5 L_5 R_2 R_5 R_L s^4 + 2 C_5 L_5 L_L R_2 R_5 R_L g_m s^3 + C_5 L_5 L_L R_2 R_5 s^3 + 4 C_5 L_5 L_L R_5 R_L s^3 + C_5 L_5 R_L s^3 + C_5 L_5 R_L s^3 + C_5 L_5 L_L R_2 R_5 R_L s^3 + C_5 L_5 L_$$

10.64 INVALID-ORDER-64 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_5C_LL_5L_LR_2R_5R_Lg_ms^4 + C_5C_LL_5L_LR_2R_5s^4 + 4C_5C_LL_5L_LR_5R_Ls^4 + 2C_5L_5L_LR_2R_5g_ms^3 + 4C_5L_5L_LR_5s^3 + 2C_5L_5R_2R_5R_Lg_ms^2 + C_5L_5R_2R_5s^2 + 4C_5L_5R_5R_Ls^2 + 4C_5R_5R_Ls^2 + 4C_5R_Ls^2 + 4C_5R$$

10.65 INVALID-ORDER-65 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

**10.66** INVALID-ORDER-66 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_{5s}}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_5L_5R_2R_5g_ms^2 - C_5L_5R_2s^2 + C_5L_5R_5s^2 + L_5R_2g_ms + L_5s + R_2R_5g_m - R_2 + R_5}{C_5C_LL_5R_2g_ms^3 + C_5C_LL_5R_2s^3 + C_5C_LL_5R_5s^3 + 2C_5L_5R_2g_ms^2 + 4C_5L_5s^2 + C_LL_5R_2g_ms^2 + C_LL_5s^2 + C_LR_2s + C_LR_2s + C_LR_5s + 2R_2g_m + 4C_5L_5s^2 + C_LL_5s^2 + C_LL_$$

**10.67** INVALID-ORDER-67 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_5 L_5 R_2 R_5 g_m s^2 - C_5 L_5 R_2 s^2 + C_5 L_5 R_5 s^2 + L_5 R_2 g_m s + L_5 s + R_2 R_5 g_m s^2 - C_5 L_5 R_2 R_5 g_m s^3 + C_5 L_5 R_2 R_5 g_m s^3 + C_5 L_5 R_2 R_5 g_m s^2 + 2 C_5 L_5 R_2 R_2 g_m s^2 + C_5 L_5 R_2 s^2 + C_5 L_5 R_5 s^2 + 4 C_5 L_5 R_2 R_2 g_m s^2 + C_5 L_5 R_2 R_2 g_m s^2 + C_5 L_5 R_2 s^2 + C_5 L_5 R_2 s^2 + C_5 L_5 R_2 R_2 g_m s^2 + C_5 L_5 R_2 R_2 g_m s^2 + C_5 L_5 R_2$$

**10.68** INVALID-ORDER-68 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_5 L_5 R_2 R_5 g_m s^2 - C_5 L_5 R_2 s^2 + C_5 L_5 R_5 s^2 + L_5 R_2 g_m s + L_5 s + R_2 R_5 g_m - R_2 + R_5\right)}{C_5 C_L L_5 R_2 g_m s^3 + 2 C_5 C_L L_5 R_2 g_m s^3 + C_5 C_L L_5 R_2 s^3 + C_5 C_L L_5 R_5 s^3 + 4 C_5 C_L L_5 R_2 s^3 + 2 C_5 L_5 R_2 g_m s^2 + 4 C_5 L_5 s^2 + C_L L_5 R_2 g_m s^2 + C_$$

10.69 INVALID-ORDER-69 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + 1\right)\left(C_{5}L_{5}R_{2}R_{5}g_{m}s^{2} - C_{5}L_{5}R_{2}s^{2} + C_{5}L_{5}R_{5}s^{2} + L_{5}R_{2}g_{m}s + L_{5}s + R_{2}R_{5}g_{m} - R_{2} + R_{5}\right)}{2C_{5}C_{L}L_{5}L_{L}R_{2}g_{m}s^{4} + 4C_{5}C_{L}L_{5}R_{2}R_{5}g_{m}s^{3} + C_{5}C_{L}L_{5}R_{2}s^{3} + C_{5}C_{L}L_{5}R_{5}s^{3} + 2C_{5}L_{5}R_{2}g_{m}s^{2} + 4C_{5}L_{5}s^{2} + C_{L}L_{5}R_{2}g_{m}s^{2} + C_{L}L_{5}s^{2} + 2C_{L}L_{L}R_{2}g_{m}s^{2} + 4C_{5}L_{5}s^{2} + C_{L}L_{5}R_{2}g_{m}s^{2} + C_{L}L_{5}s^{2} + C_{L}L_{5}s^{2} + C_{L}L_{5}R_{2}g_{m}s^{2} + C_{L}L_{5}R_{2}g$$

10.70 INVALID-ORDER-70 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

10.71 INVALID-ORDER-71 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_{5s}}{C_5L_5s^2+1} + R_5, L_Ls + R_L + \frac{1}{C_Ls}\right)$$

10.72 INVALID-ORDER-72 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_5 C_L L_5 L_L R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 L_L R_2 R_L s^4 + C_5 C_L L_5 L_L R_5 R_L s^4 + C_5 L_5 L_L R_2 R_5 g_m s^3 + 2 C_5 L_5 L_L R_2 R_L g_m s^3 + C_5 L_5 L_L R_2 s^3 + C_5 L_5 L_L R_5 s^3 + 4 C_5 L_5 L_L R_5 s^3 + 4 C_5 L_5 L_L R_5 s^3 + C_5 L_5 L_L R_5 s^3$$

10.73 INVALID-ORDER-73 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

10.74 INVALID-ORDER-74 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_5 C_L L_5 L_L R_2 R_5 g_m s^4 + 2 C_5 C_L L_5 L_L R_2 R_L g_m s^4 + C_5 C_L L_5 L_L R_2 s^4 + C_5 C_L L_5 L_L R_5 s^4 + 4 C_5 C_L L_5 L_L R_2 s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^3 + C_5 C_L L_5 R_2 R_2 R_5 R_L g_m s^3 + C_5 C_L L_5 R_L g_m s^3 + C_5 C_L L_5 R_L g_m s^3 + C_5 C_L L_5 R_L g_m$$

10.75 INVALID-ORDER-75 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_5L_5R_2R_5g_ms^2 - C_5L_5R_2s^2 + C_5L_5R_5s^2 - C_5R_2R_5s + R_2R_5g_m - R_2 + R_5}{C_5C_LL_5R_2s^3 + C_5C_LL_5R_5s^3 + C_5C_LR_2R_5s^2 + 2C_5L_5R_2g_ms^2 + 4C_5L_5s^2 + 2C_5R_2R_5g_ms + 4C_5R_5s + C_LR_2R_5g_ms + C_LR_2s + C_LR_2s$$

10.76 INVALID-ORDER-76 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L}{C_L R_L s + 1}\right)$$

10.77 INVALID-ORDER-77 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, R_L + \frac{1}{C_Ls}\right)$$

10.78 INVALID-ORDER-78 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_5 L_5 R_2 R_5 g_m s^2 - C_5 L_5 R_2 s^2 + C_5 L_5 R_5 s^2 - C_5 R_2 R_5 s + R_2 R_5 g_m s^2 + C_5 L_4 R_2 R_5 g_m s^3 + C_5 C_L L_5 R_2 R_5 g_m s^3 + C_5 C_L L_5 R_2 R_5 g_m s^3 + C_5 C_L L_4 R_2 R_5 g_m s^3 + 4 C_5 C_L L_4 R_5 s^3 + C_5 C_L R_2 R_5 s^2 + 2 C_5 L_5 R_2 g_m s^2 + 4 C_5 C_L R_2 R_5 g_m s^3 + C_5 C_L R_2 R$$

10.79 INVALID-ORDER-79 
$$Z(s) = \left(\infty, R_2, \infty, \infty, \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_5 L_5 R_2 R_5 g_m s^2 - C_5 L_5 R_2 s^2 + C_5 L_5 R_5 s^2 - C_5 R_2 R_5 s + R_5 R_5 r_3 + C_5 L_4 R_5 r_4 R_5 r_5 R_5 r_4 R_5 r_5$$

10.80 INVALID-ORDER-80 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right)\left(C_L R_L R_L$$

10.81 INVALID-ORDER-81 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_5 C_L L_5 L_L R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 L_L R_2 R_L s^4 + C_5 C_L L_5 L_L R_5 R_L s^4 + C_5 C_L L_L R_2 R_5 R_L s^3 + C_5 L_5 L_L R_2 R_5 g_m s^3 + 2 C_5 L_5 L_L R_2 R_L g_m s^3 + C_5 L_5 L_L R_2 s^3 + C_5 L_5 L_L R_2$$

10.82 INVALID-ORDER-82 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_5 C_L L_5 L_L R_2 R_5 g_m s^4 + 2 C_5 C_L L_5 L_L R_2 R_L g_m s^4 + C_5 C_L L_5 L_L R_2 s^4 + C_5 C_L L_5 L_L R_5 s^4 + 4 C_5 C_L L_5 L_L R_2 s^4 + 2 C_5 C_L L_L R_2 R_5 R_L g_m s^3 + C_5 C_L L_L R_2 R_5 R_L g_m s^4 + 2 C_5 C_L L_L R_2 R_L g_m s^4 + 2 C_5 C_L L_L R_2 R_L g_m s^4 + 2 C_5 C_L L_L R_2 R_L g_m s^4 + 2 C_5 C_L L_L R_2 R_L g_m s^4 + 2 C_5 C_L L_L R_2 R_L g_m s^$$

10.83 INVALID-ORDER-83 
$$Z(s) = \left(\infty, \ R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_5 C_L L_5 L_L R_2 R_5 g_m s^4 + 2 C_5 C_L L_5 L_L R_2 R_L g_m s^4 + C_5 C_L L_5 L_L R_2 s^4 + C_5 C_L L_5 L_L R_5 s^4 + 4 C_5 C_L L_5 L_L R_2 s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^3 + C_5 C_L L_5 R_2 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_5 C_L L_5 R_5 R_L g_m s^4 + C_5 C_L R_5 R_L g_m s^4 + C_5 C_L$$

10.84 INVALID-ORDER-84 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, R_L\right)$$

$$H(s) = \frac{R_L (C_2 R_5 s + R_5 g_m - 1)}{C_2 R_5 s + 4 C_2 R_L s + R_5 g_m + 2 R_L g_m + 1}$$

10.85 INVALID-ORDER-85 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 R_5 s + R_5 g_m - 1\right)}{4C_2 C_L L_L s^3 + C_2 C_L R_5 s^2 + 4C_2 s + 2C_L L_L q_m s^2 + C_L R_5 q_m s + C_L s + 2q_m}$$

10.86 INVALID-ORDER-86 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_L R_5 s^3 + 4 C_2 L_L s^2 + C_2 R_5 s + C_L L_L R_5 g_m s^2 + C_L L_L s^2 + 2 L_L g_m s + R_5 g_m + 1}$$

10.87 INVALID-ORDER-87 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_2 R_5 s + R_5 g_m - 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right)}{4 C_2 C_L L_L s^3 + C_2 C_L R_5 s^2 + 4 C_2 C_L R_L s^2 + 4 C_2 s + 2 C_L L_L g_m s^2 + C_L R_5 g_m s + 2 C_L R_L g_m s + C_L s + 2 g_m r^2}$$

**10.88** INVALID-ORDER-88 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_L R_5 R_L s^3 + C_2 L_L R_5 s^2 + 4 C_2 L_L R_L s^2 + C_2 R_5 R_L s + C_L L_L R_5 R_L g_m s^2 + C_L L_L R_L s^2 + L_L R_5 g_m s + 2 L_L R_L g_m s + L_L s + R_5 R_L g_m + R_L R_L g_m s^2 + C_L R_L g_m s + 2 R_L R_L g_m s + L_L R_L g_m s + L_L R_L g_m s + R_L R_L g_m s + R_L$$

**10.89** INVALID-ORDER-89 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_2R_5s + R_5g_m - 1\right)\left(C_LL_LR_Ls^2 + L_Ls + R_L\right)}{C_2C_LL_LR_5s^3 + 4C_2C_LL_LR_Ls^3 + 4C_2L_Ls^2 + C_2R_5s + 4C_2R_Ls + C_LL_LR_5g_ms^2 + 2C_LL_LR_Lg_ms^2 + C_LL_Ls^2 + 2L_Lg_ms + R_5g_m + 2R_Lg_m + 1}$$

**10.90** INVALID-ORDER-90 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_2 R_5 s + R_5 g_m - 1 \right)}{C_2 C_L L_L R_5 s^3 + 4 C_2 C_L L_L R_5 s^3 + C_2 C_L R_5 R_L s^2 + C_2 R_5 s + 4 C_2 R_L s + C_L L_L R_5 g_m s^2 + 2 C_L L_L R_L g_m s^2 + C_L L_L s^2 + C_L R_5 R_L g_m s + C_L R_L s + R_5 g_m + 2 R_L g_m + 1}$$

10.91 INVALID-ORDER-91 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2s - C_5s + g_m}{s(4C_2C_5s + C_2C_Ls + C_5C_Ls + 2C_5g_m + C_Lg_m)}$$

10.92 INVALID-ORDER-92 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 s - C_5 s + g_m\right)}{s \left(4C_2 C_5 C_L R_L s^2 + 4C_2 C_5 s + C_2 C_L s + 2C_5 C_L R_L g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m\right)}$$

10.93 INVALID-ORDER-93 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 s - C_5 s + g_m\right)}{s \left(4C_2 C_5 C_L L_L s^3 + 4C_2 C_5 s + C_2 C_L s + 2C_5 C_L L_L g_m s^2 + C_5 C_L s + 2C_5 g_m + C_L g_m\right)}$$

10.94 INVALID-ORDER-94  $Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$ 

$$H(s) = \frac{L_L s \left(C_2 s - C_5 s + g_m\right)}{4C_2 C_5 L_L s^3 + C_2 C_L L_L s^3 + C_2 s + C_5 C_L L_L s^3 + 2C_5 L_L g_m s^2 + C_5 s + C_L L_L g_m s^2 + g_m}$$

10.95 INVALID-ORDER-95 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{2}s - C_{5}s + g_{m}\right)\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)}{s\left(4C_{2}C_{5}C_{L}L_{L}s^{3} + 4C_{2}C_{5}C_{L}R_{L}s^{2} + 4C_{2}C_{5}s + C_{2}C_{L}s + 2C_{5}C_{L}L_{L}g_{m}s^{2} + 2C_{5}C_{L}R_{L}g_{m}s + C_{5}C_{L}s + 2C_{5}g_{m} + C_{L}g_{m}\right)}$$

10.96 INVALID-ORDER-96 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 s - C_5 s + g_m\right)}{4 C_2 C_5 L_L R_L s^3 + C_2 C_L L_L R_L s^3 + C_2 L_L s^2 + C_5 R_L s + C_5 C_L L_L R_L s^3 + 2 C_5 L_L R_L g_m s^2 + C_5 L_L s^2 + C_5 R_L s + C_L L_L R_L g_m s^2 + L_L g_m s + R_L g_m s^2 + C_5 R_L s + C_5 R_L$$

10.97 INVALID-ORDER-97 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{2}s - C_{5}s + g_{m}\right)\left(C_{L}L_{L}R_{L}s^{2} + L_{L}s + R_{L}\right)}{4C_{2}C_{5}C_{L}L_{L}R_{L}s^{4} + 4C_{2}C_{5}L_{L}s^{3} + 4C_{2}C_{5}R_{L}s^{2} + C_{2}C_{L}L_{L}s^{3} + C_{2}s + 2C_{5}C_{L}L_{L}R_{L}g_{m}s^{3} + C_{5}C_{L}L_{L}s^{3} + 2C_{5}L_{L}g_{m}s^{2} + 2C_{5}R_{L}g_{m}s + C_{5}s + C_{L}L_{L}g_{m}s^{2} + g_{m}}$$

10.98 INVALID-ORDER-98 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

**10.99** INVALID-ORDER-99 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 R_5 s - C_5 R_5 s + R_5 g_m - 1\right)}{4 C_2 C_5 C_L R_5 R_L s^3 + 4 C_2 C_5 R_5 s^2 + C_2 C_L R_5 s^2 + 4 C_2 C_L R_L s^2 + 4 C_2 s + 2 C_5 C_L R_5 R_L g_m s^2 + C_5 C_L R_5 s^2 + 2 C_5 R_5 g_m s + C_L R_5$$

**10.100** INVALID-ORDER-100 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$$

10.101 INVALID-ORDER-101 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 R_5 s - C_5 R_5 s + R_5 g_m - 1\right)}{4 C_2 C_5 L_L R_5 s^3 + C_2 C_L L_L R_5 s^3 + 4 C_2 L_L s^2 + C_2 R_5 s + C_5 C_L L_L R_5 s^3 + 2 C_5 L_L R_5 g_m s^2 + C_5 R_5 s + C_L L_L R_5 g_m s^2 + C_L L_L s^2 + 2 L_L g_m s + R_5 g_m + 1}$$

**10.102** INVALID-ORDER-102 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}R_{5}s - C_{5}R_{5}s + R_{5}g_{m} - 1\right)}{4C_{2}C_{5}C_{L}L_{L}R_{5}s^{4} + 4C_{2}C_{5}L_{L}S^{3} + 4C_{2}C_{5}R_{5}s^{2} + 4C_{2}C_{L}L_{S}^{3} + C_{2}C_{L}R_{5}s^{2} + 4C_{2}C_{L}R_{5}s^{2} + 4C_{2}S_{L}L_{L}S^{2} + 4C_{2}S_{L}L_{L}S^{2}$$

10.103 INVALID-ORDER-103 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 R_5 s - C_5 R_5 s + R_5 g_m - 1\right)}{4 C_2 C_5 L_L R_5 R_L s^3 + C_2 L_L R_5 s^2 + 4 C_2 L_L R_5 s^2 + C_2 R_5 R_L s + C_5 C_L L_L R_5 R_L s^3 + 2 C_5 L_L R_5 R_L g_m s^2 + C_5 L_L R_5 s^2 + C_5 R_5 R_L s + C_L L_L R_5 R_L g_m s^2 + C_L R_5 R_L s + C_L R_5 R_L$$

**10.104** INVALID-ORDER-104 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}R_{S}^{2} + L_{L}s + R_{L}\right)\left(C_{2}R_{5}s - C_{5}R_{5}s + R_{5}g_{m} - 1\right)}{4C_{2}C_{5}C_{L}L_{L}R_{5}s^{4} + 4C_{2}C_{5}L_{L}R_{5}s^{3} + 4C_{2}C_{L}L_{L}R_{5}s^{3} + 4C_{2}C_{L}L_{L}R_{5}s^{3} + 4C_{2}L_{L}s^{2} + C_{2}R_{5}s + 4C_{2}R_{L}s + 2C_{5}C_{L}L_{L}R_{5}R_{L}g_{m}s^{3} + C_{5}C_{L}L_{L}R_{5}s^{3} + 2C_{5}L_{L}R_{5}s^{3} + 2C_{5}L_{L}R_{5}s^{3} + C_{5}C_{L}L_{L}R_{5}s^{3} + C_{5}C_{L}L$$

10.105 INVALID-ORDER-105 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_2 R_5 s - C_5 R_5 s + R_5 g_m - 1 \right)}{4 C_2 C_5 C_L L_L R_5 R_L s^4 + 4 C_2 C_5 R_5 R_L s^2 + C_2 C_L L_L R_5 s^3 + 4 C_2 C_L L_L R_5 s^3 + 4 C_2 C_L L_L R_5 s^3 + C_5 C_L R_5 R_L s^2 + 2 C_5 C_L R_5 R_L s^2 + C_5 R_5 R_L s^2 +$$

**10.106** INVALID-ORDER-106 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5R_5s^2 + C_2s + C_5R_5g_ms - C_5s + g_m}{s\left(C_2C_5C_LR_5s^2 + 4C_2C_5s + C_2C_Ls + C_5C_LR_5g_ms + C_5C_Ls + 2C_5g_m + C_Lg_m\right)}$$

**10.107** INVALID-ORDER-107 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 R_5 s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 C_L R_5 R_L s^3 + C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_L s^2 + C_2 C_L R_L s^2 + C_5 C_L R_5 R_L g_m s^2 + C_5 C_L R_L s^2 + C_5 R_5 g_m s + 2 C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m r^2 + C_5 R_5 r^2$$

**10.108** INVALID-ORDER-108 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 R_5 s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 C_L R_L s^2 + 4 C_2 C_5 s + C_2 C_L s + C_5 C_L R_5 g_m s + 2 C_5 C_L R_L g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m\right)}$$

**10.109** INVALID-ORDER-109 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 R_5 s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m\right)}{s \left(4 C_2 C_5 C_L L_L s^3 + C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 s + C_2 C_L s + 2 C_5 C_L L_L g_m s^2 + C_5 C_L R_5 g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m\right)}$$

**10.110** INVALID-ORDER-110 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 R_5 s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m\right)}{C_2 C_5 C_L L_L R_5 s^4 + 4 C_2 C_5 L_L s^3 + C_2 C_5 R_5 s^2 + C_2 C_L L_L s^3 + C_2 s + C_5 C_L L_L R_5 g_m s^3 + C_5 C_L L_L s^3 + 2 C_5 L_L g_m s^2 + C_5 R_5 g_m s + C_5 s + C_L L_L g_m s^2 + g_m}$$

**10.111** INVALID-ORDER-111 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 C_5 R_5 s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m\right)}{s \left(4 C_2 C_5 C_L L_L s^3 + C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 C_L R_L s^2 + 4 C_2 C_5 s + C_2 C_L s + 2 C_5 C_L L_L g_m s^2 + C_5 C_L R_5 g_m s + 2 C_5 C_L R_L g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m\right)}$$

10.112 INVALID-ORDER-112 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 C_5 R_5 s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m\right)}{C_2 C_5 C_L L_L R_5 R_L s^4 + C_2 C_5 L_L R_5 s^3 + 4 C_2 C_5 L_L R_5 s^3 + C_2 C_5 R_5 R_L s^2 + C_2 C_L L_L R_L s^3 + C_2 L_L s^2 + C_2 R_L s + C_5 C_L L_L R_5 R_L g_m s^3 + C_5 C_L L_L R_5 g_m s^2 + 2 C_5 L_L R_$$

10.113 INVALID-ORDER-113 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}R_{L}s^{2} + L_{L}s + R_{L}\right)\left(C_{2}C_{5}R_{5}s^{2} + C_{2}s + C_{5}R_{5}g_{m}s - C_{5}s + g_{m}\right)}{C_{2}C_{5}C_{L}L_{L}R_{5}s^{4} + 4C_{2}C_{5}L_{L}s^{3} + C_{2}C_{5}R_{5}s^{2} + 4C_{2}C_{5}R_{L}s^{2} + C_{2}C_{L}L_{L}s^{3} + C_{2}s + C_{5}C_{L}L_{L}R_{5}g_{m}s^{3} + 2C_{5}C_{L}L_{L}R_{2}g_{m}s^{3} + C_{5}C_{L}L_{L}s^{3} + 2C_{5}L_{L}g_{m}s^{2} + C_{5}C_{L}L_{L}s^{3} + C_{5}C_{L}L_{L}s^$$

10.114 INVALID-ORDER-114 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_2 C_5 R_5 s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 C_L L_L R_5 s^4 + 4 C_2 C_5 C_L L_L R_5 s^4 + C_2 C_5 C_L L_R s^3 + C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_L s^2 + C_2 C_L L_L s^3 + C_2 C_L L_L R_5 g_m s^3 + 2 C_5 C_L L_L R_5 g_m s^3 + C_5 C_L R_5 g_m$$

10.115 INVALID-ORDER-115 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 s^3 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m \right)}{C_2 C_5 L_5 s^3 + 4 C_2 C_5 R_L s^2 + C_2 s + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + g_m}$$

**10.116** INVALID-ORDER-116 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5s^3 + C_2s + C_5L_5g_ms^2 - C_5s + g_m}{s\left(C_2C_5C_LL_5s^3 + 4C_2C_5s + C_2C_Ls + C_5C_LL_5g_ms^2 + C_5C_Ls + 2C_5g_m + C_Lg_m\right)}$$

**10.117** INVALID-ORDER-117 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 s^3 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m \right)}{C_2 C_5 C_L L_5 R_L s^4 + C_2 C_5 L_5 s^3 + 4 C_2 C_5 R_L s^2 + C_2 C_L R_L s^2 + C_2 s + C_5 C_L L_5 R_L g_m s^3 + C_5 C_L R_L s^2 + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m r^2 + C_5 R_L g_m s^2 +$$

**10.118** INVALID-ORDER-118 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_5 s^3 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_5 s^3 + 4 C_2 C_5 C_L R_L s^2 + 4 C_2 C_5 s + C_2 C_L s + C_5 C_L L_5 g_m s^2 + 2 C_5 C_L R_L g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m\right)}$$

**10.119** INVALID-ORDER-119 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_5 s^3 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_5 s^3 + 4 C_2 C_5 C_L L_L s^3 + 4 C_2 C_5 s + C_2 C_L s + C_5 C_L L_5 g_m s^2 + 2 C_5 C_L L_L g_m s^2 + C_5 C_L s + 2 C_5 g_m + C_L g_m\right)}$$

10.120 INVALID-ORDER-120 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_5 s^3 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m\right)}{C_2 C_5 C_L L_5 L_L s^5 + C_2 C_5 L_5 s^3 + 4 C_2 C_5 L_L s^3 + C_2 C_L L_L s^3 + C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_L s^3 + C_5 L_5 g_m s^2 + 2 C_5 L_L g_m s^2 + C_5 s + C_L L_L g_m s^2 + g_m}$$

**10.121** INVALID-ORDER-121 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}C_{5}L_{5}s^{3} + C_{2}s + C_{5}L_{5}g_{m}s^{2} - C_{5}s + g_{m}\right)}{s\left(C_{2}C_{5}C_{L}L_{5}s^{3} + 4C_{2}C_{5}C_{L}L_{L}s^{3} + 4C_{2}C_{5}C_{L}R_{L}s^{2} + 4C_{2}C_{5}s + C_{2}C_{L}s + C_{5}C_{L}L_{5}g_{m}s^{2} + 2C_{5}C_{L}L_{L}g_{m}s^{2} + 2C_{5}C_{L}R_{L}g_{m}s + C_{5}C_{L}s + 2C_{5}g_{m} + C_{L}g_{m}\right)}$$

10.122 INVALID-ORDER-122 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 C_5 L_5 s^3 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m\right)}{C_2 C_5 C_L L_5 L_L R_L s^5 + C_2 C_5 L_5 L_L s^4 + C_2 C_5 L_5 R_L s^3 + 4 C_2 C_5 L_L R_L s^3 + C_2 C_L L_L R_L s^3 + C_2 L_L s^2 + C_2 R_L s + C_5 C_L L_5 L_L R_L g_m s^4 + C_5 C_L L_L R_L s^3 + C_5 L_5 L_L g_m s^3 + C_5 L_5 R_L s^3 + C_5 L_5 R_L s^3 + C_5 R_L s^3 +$$

10.123 INVALID-ORDER-123 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}S^{2} + L_{L}s + R_{L}\right)\left(C_{2}C_{5}L_{5}s^{3} + C_{2}s + C_{5}L_{5}g_{m}s^{2} - C_{5}s + g_{m}\right)}{C_{2}C_{5}C_{L}L_{5}L_{L}s^{5} + 4C_{2}C_{5}L_{L}s^{3} + 4C_{2}C_{5}L_{L}s^{3} + 4C_{2}C_{5}L_{L}s^{3} + C_{2}C_{L}L_{L}s^{3} + C_{2}s + C_{5}C_{L}L_{5}L_{L}g_{m}s^{4} + 2C_{5}C_{L}L_{L}R_{L}g_{m}s^{3} + C_{5}C_{L}L_{L}s^{3} + C_{5}L_{5}g_{m}s^{2} + 2C_{5}C_{L}L_{5}C_{L}C_{$$

10.124 INVALID-ORDER-124 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_2 C_5 L_5 s^3 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m \right)}{C_2 C_5 C_L L_5 L_L s^5 + C_2 C_5 C_L L_5 R_L s^4 + 4 C_2 C_5 C_L L_L R_L s^4 + C_2 C_5 L_5 s^3 + 4 C_2 C_5 R_L s^2 + C_2 C_L L_L s^3 + C_2 C_L L_L s^2 + C_5 C_L L_5 L_L g_m s^4 + C_5 C_L L_5 R_L g_m s^3 + 2 C_5 C_L L_L R_L s^4 + C_5 C_L L_5 R_L g_m s^3 + 2 C_5 C_L L_L R_L s^4 + C_5 C_L L_5 R_L g_m s^3 + C_5 C_L L_5 R_L g_m s^4 + C_$$

**10.125** INVALID-ORDER-125 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 L_5 s^2 - C_5 L_5 s^2 + L_5 g_m s - 1 \right)}{4 C_2 C_5 L_5 R_L s^3 + C_2 L_5 s^2 + 4 C_2 R_L s + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2 R_L g_m + 1}$$

10.126 INVALID-ORDER-126 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2L_5s^2 - C_5L_5s^2 + L_5g_ms - 1}{4C_2C_5L_5s^3 + C_2C_LL_5s^3 + 4C_2s + C_5C_LL_5s^3 + 2C_5L_5g_ms^2 + C_LL_5g_ms^2 + C_Ls + 2g_ms^2 +$$

10.127 INVALID-ORDER-127 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 L_5 s^2 - C_5 L_5 s^2 + L_5 g_m s - 1 \right)}{4 C_2 C_5 L_5 R_L s^3 + C_2 C_L L_5 R_L s^3 + C_2 L_5 s^2 + 4 C_2 R_L s + C_5 C_L L_5 R_L s^3 + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + C_L L_5 R_L g_m s^2 + C_L R_L s + L_5 g_m s + 2 R_L g_m + 1}$$

10.128 INVALID-ORDER-128 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 L_5 s^2 - C_5 L_5 s^2 + L_5 g_m s - 1\right)}{4 C_2 C_5 C_L L_5 R_L s^4 + 4 C_2 C_5 L_5 s^3 + C_2 C_L L_5 s^3 + 4 C_2 C_L R_L s^2 + 4 C_2 s + 2 C_5 C_L L_5 R_L g_m s^3 + C_5 C_L L_5 s^3 + 2 C_5 L_5 g_m s^2 + C_L L_5 g_m s^2 + 2 C_L R_L g_m s + C_L s + 2 g_m r^2 + 2 C_L R_L g_m s^2 + 2 C_L R_L g_m s^2 + C_L R_L g_m s^2 + 2 C_L R_L g_m s^2 + C_L R_L g_m s^2 +$$

**10.129** INVALID-ORDER-129 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + 1\right)\left(C_{2}L_{5}s^{2} - C_{5}L_{5}s^{2} + L_{5}g_{m}s - 1\right)}{4C_{2}C_{5}C_{L}L_{5}L_{L}s^{5} + 4C_{2}C_{5}L_{5}s^{3} + C_{2}C_{L}L_{5}s^{3} + 4C_{2}C_{L}L_{L}s^{3} + 4C_{2}s + 2C_{5}C_{L}L_{5}L_{L}g_{m}s^{4} + C_{5}C_{L}L_{5}s^{3} + 2C_{5}L_{5}g_{m}s^{2} + C_{L}L_{5}g_{m}s^{2} + C_{L}L_{5}g$$

**10.130** INVALID-ORDER-130 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 L_5 s^2 - C_5 L_5 s^2 + L_5 g_m s - 1\right)}{4 C_2 C_5 L_5 L_L s^4 + C_2 C_L L_5 L_L s^4 + C_2 L_L s^2 + 4 C_2 L_L s^2 + C_5 C_L L_5 L_L s^4 + 2 C_5 L_5 L_L g_m s^3 + C_5 L_5 S^2 + C_L L_5 L_L g_m s^3 + C_L L_L s^2 + L_5 g_m s + 2 L_L g_m s + 1}$$

**10.131** INVALID-ORDER-131 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}L_{5}s^{2} - C_{5}L_{5}s^{2} + L_{5}g_{m}s - 1\right)}{4C_{2}C_{5}C_{L}L_{5}L_{L}s^{5} + 4C_{2}C_{5}L_{5}s^{3} + C_{2}C_{L}L_{5}s^{3} + 4C_{2}C_{L}L_{5}s^{3} + 4C_{2}C_{L}L_{5}s^{2} + 4C_{2}s + 2C_{5}C_{L}L_{5}L_{L}g_{m}s^{4} + 2C_{5}C_{L}L_{5}R_{L}g_{m}s^{3} + C_{5}C_{L}L_{5}s^{3} + 2C_{5}L_{5}g_{m}s^{2}}$$

10.132 INVALID-ORDER-132 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 L_5 s^2 - C_5 L_5 s^2 + L_5 g_m s - 1\right)}{4 C_2 C_5 L_5 L_L R_L s^4 + C_2 C_L L_5 L_L R_L s^3 + C_2 L_5 R_L s^2 + 4 C_2 L_L R_L s^2 + C_5 C_L L_5 L_L R_L s^4 + 2 C_5 L_5 L_L R_L g_m s^3 + C_5 L_5 L_L s^3 + C_5 L_5 L_L R_L g_m s^3 + C_L L_5 L_L R_L g_m$$

10.133 INVALID-ORDER-133 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}S^{2} + L_{L}s + R_{L}\right)\left(C_{2}L_{5}s^{2} - C_{5}L_{5}s^{2} + L_{5}g_{m}s - C_{5}L_{5}L_{L}S^{2} + 4C_{2}L_{L}S^{2} + 4C_{2$$

10.134 INVALID-ORDER-134 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_2 L_5 s^2 - C_5 L_5 s^2 + L_5 g_m s - 1 \right)}{4 C_2 C_5 C_L L_5 L_L R_L s^5 + 4 C_2 C_5 L_5 L_L S^4 + C_2 C_L L_5 L_L S^3 + 4 C_2 C_L L_L R_L s^3 + C_2 L_5 S^2 + 4 C_2 R_L s + 2 C_5 C_L L_5 L_L R_L g_m s^4 + C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_L s^3 + 2 C_5 C_L L_5 R_L s^4 + C_5 C_L L_5 R_L s^3 + 2 C_5 C_L L_5 R_L s^4 + C_5 C_L L_5 R_L s^4 + C_5 C_L L_5 R_L s^3 + 2 C_5 C_L L_5 R_L s^4 + C_5 C_L L_$$

**10.135** INVALID-ORDER-135 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_L s^2 + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s + 2 C_5 R_L g_m s + C_5 s + g_m}$$

**10.136** INVALID-ORDER-136 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5s^3 + C_2C_5R_5s^2 + C_2s + C_5L_5g_ms^2 + C_5R_5g_ms - C_5s + g_m}{s \cdot (C_2C_5C_LL_5s^3 + C_2C_5C_LR_5s^2 + 4C_2C_5s + C_2C_Ls + C_5C_LL_5g_ms^2 + C_5C_LR_5g_ms + C_5C_Ls + 2C_5g_m + C_Lg_m)}$$

**10.137** INVALID-ORDER-137 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 C_L L_5 R_L s^4 + C_2 C_5 C_L R_5 R_L s^3 + C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_L s^2 + C_2 C_L R_L s^2 + C_2 S_L L_5 R_L g_m s^3 + C_5 C_L R_5 R_L g_m s^2 + C_5 C_L R_L s^2 + C_5 L_5 g_m s^2 + C_5 C_L R_5 R_L g_m s^2 + C_5 C_L R_L g_m$$

**10.138** INVALID-ORDER-138 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_5 s^3 + C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 s + C_2 C_L s + C_5 C_L L_5 g_m s^2 + C_5 C_L R_5 g_m s + 2 C_5 C_L R_L g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m\right)}$$

**10.139** INVALID-ORDER-139 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_5 s^3 + 4 C_2 C_5 C_L L_5 s^3 + 4 C_2 C_5 C_L L_5 s^2 + 4 C_2 C_5 s + C_2 C_L s + C_5 C_L L_5 g_m s^2 + 2 C_5 C_L L_1 g_m s^2 + C_5 C_L R_5 g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m\right)}$$

**10.140** INVALID-ORDER-140 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m\right)}{C_2 C_5 C_L L_L s^5 + C_2 C_5 L_L L_R 5 s^4 + C_2 C_5 L_5 s^3 + 4 C_2 C_5 L_L s^3 + C_2 C_5 R_5 s^2 + C_2 C_L L_L s^3 + C_5 C_L L_L L_R s g_m s^4 + C_5 C_L L_L R_5 g_m s^3 + C_5 C_L L_L s^3 + C_5 L_5 g_m s^2 + 2 C_5 L_L g_m s^4 + C_5 C_L L_L R_5 g_m s^3 + C_5 C_L L_L s^3 + C_5 C_L L_L g_m s^4 + C_5 C_L L_L R_5 g_m s^3 + C_5 C_L L_L s^3 + C_5 C_L L_L g_m s^4 + C_5 C_L g_m s^4 + C_5 C_L$$

**10.141** INVALID-ORDER-141 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_5 s^3 + 4 C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 C_L R_L s^2 + 4 C_2 C_5 s + C_2 C_L s + C_5 C_L L_5 g_m s^2 + 2 C_5 C_L L_5 g_m s^2 + C_5 C_L R_5 g_m s + 2 C_5 C_L R_5 g_m s + C_5 C_L R_5 g_m s +$$

10.142 INVALID-ORDER-142 
$$Z(s) = \left( \infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}} \right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 C_5 L_5 s^3 + C_2 C_5 R_4 s^4 + C_2 C_5 L_L R_5 s^3 + C_2 C_5 R_4 s^3 + C_2 C_5 L_L R_5 s^3 + C_2 C_5 R_4 s^3 + C_2 C_5 L_L R_5 s^3 + C_2 C_5 L_L R_5$$

**10.143** INVALID-ORDER-143 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

10.144 INVALID-ORDER-144 
$$Z(s) = \left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_2 C_5 L_L s^2 + C_2 C_5 C_L L_L s^3 + C_2 C_5 C_L L_L s^4 + C_2 C_5 C_L L_L s^4 + C_2 C_5 C_L L_L s^3 + C_2 C_5 L_L s^3 + C_2 C_5 L_L s^3 + C_2 C_5 L_L s^3 + C_2 C_L L_$$

10.145 INVALID-ORDER-145 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 L_5 R_5 s^2 - C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5 \right)}{4 C_2 C_5 L_5 R_5 R_L s^3 + C_2 L_5 R_5 s^2 + 4 C_2 L_5 R_L s^2 + 4 C_2 R_5 R_L s + 2 C_5 L_5 R_5 R_L g_m s^2 + C_5 L_5 R_5 g_m s + 2 L_5 R_L g_m s + L_5 s + 2 R_5 R_L g_m s + R_5 R_L$$

10.146 INVALID-ORDER-146 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2L_5R_5s^2 - C_5L_5R_5s^2 + L_5R_5g_ms - L_5s - R_5}{4C_2C_5L_5R_5s^3 + C_2C_LL_5R_5s^3 + 4C_2L_5s^2 + 4C_2R_5s + C_5C_LL_5R_5s^3 + 2C_5L_5R_5g_ms^2 + C_LL_5R_5g_ms^2 + C_LL_5s^2 + C_LR_5s + 2L_5g_ms + 2R_5g_ms^2 + C_LL_5R_5g_ms^2 +$$

10.147 INVALID-ORDER-147 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 L_5 R_5 s^2 - C_5 L_5 R_5 s^2 + L_5 R_5 g_m s - L_5 s - R_5 \right)}{4 C_2 C_5 L_5 R_5 R_L s^3 + C_2 C_L L_5 R_5 s^2 + 4 C_2 L_5 R_L s^2 + 4 C_2 R_5 R_L s + C_5 C_L L_5 R_5 R_L s^3 + 2 C_5 L_5 R_5 R_L g_m s^2 + C_5 L_5 R_5 R_L g_m s^2 + C_L L_5 R_L g_m$$

10.151 INVALID-ORDER-151 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$$

10.152 INVALID-ORDER-152 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

 $H(s) = \frac{L_L R_L s \left(C_2 L_5 R_5 s^2 - C_5 R_5 R_4 s^2 + C_2 C_L L_5 L_L R_5 R_L s^4 + C_2 L_5 L_L R_5 s^3 + 4 C_2 L_5 L_L R_5 R_L s^3 + C_2 L_5 R_5 R_L s^2 + 4 C_2 L_L R_5 R_L s^2 + C_5 C_L L_5 L_L R_5 R_L s^4 + 2 C_5 L_5 L_L R_5 R_L s^3 + C_5 L_5 L_L R_5 R_L s^4 + 2 C_5 L_L R_5 R_L s^4 + 2 C_5 L_L R_5 R_L s^4 +$ 

10.153 INVALID-ORDER-153 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{4C_2C_5C_LL_5L_LR_5R_Ls^5 + 4C_2C_5L_5L_LR_5s^4 + 4C_2C_5L_5R_5R_Ls^3 + C_2C_LL_5L_LR_5s^4 + 4C_2C_LL_5L_LR_5s^4 + 4C_2C_LL_5R_Ls^3 + 4C_2L_5R_Ls^3 + 4C_2R_Ls^3 + 4C$$

10.154 INVALID-ORDER-154 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{1}{4C_2C_5C_LL_5L_LR_5R_Ls^5 + 4C_2C_5L_5R_5R_Ls^3 + C_2C_LL_5L_LR_5s^4 + 4C_2C_LL_5L_LR_Ls^4 + C_2C_LL_5R_5R_Ls^3 + 4C_2C_LL_5R_5R_Ls^3 + C_2L_5R_5s^2 + 4C_2L_5R_Ls^2 + 4C_2R_5R_Ls^3 + 4C_2C_LL_5R_5R_Ls^3 + 4C_2C_LL_5R_Ls^3 + 4C_2C_LL_5R_$$

**10.155** INVALID-ORDER-155 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_5 s^3 + C_2 L_5 s^2 + C_2 R_5 s + C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1 \right)}{C_2 C_5 L_5 R_5 s^3 + 4 C_2 C_5 L_5 R_L s^3 + C_2 L_5 s^2 + C_2 R_5 s + 4 C_2 R_L s + C_5 L_5 R_5 g_m s^2 + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + R_5 g_m + 2 R_L g_m + 1}$$

**10.156** INVALID-ORDER-156 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5R_5s^3 + C_2L_5s^2 + C_2R_5s + C_5L_5R_5g_ms^2 - C_5L_5s^2 + L_5g_ms + R_5g_m - 1}{C_2C_5C_LL_5R_5s^4 + 4C_2C_5L_5s^3 + C_2C_LL_5s^3 + C_2C_LR_5s^2 + 4C_2s + C_5C_LL_5R_5g_ms^3 + C_5C_LL_5s^3 + 2C_5L_5g_ms^2 + C_LL_5g_ms^2 + C_LR_5g_ms + C_Ls + 2g_m}$$

**10.157** INVALID-ORDER-157 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$$

10.158 INVALID-ORDER-158 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_5 R_5 s^3 + C_2 L_5 s^2 + C_2 R_5 s + C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1\right)}{C_2 C_5 C_L L_5 R_5 s^4 + 4 C_2 C_5 L_L s^4 + 4 C_2 C_5 L_5 s^3 + C_2 C_L L_5 s^3 + C_2 C_L R_5 s^2 + 4 C_2 C_L R_L s^2 + 4 C_2 s + C_5 C_L L_5 R_5 g_m s^3 + 2 C_5 C_L L_5 R_L g_m s^3 + C_5 C_L L_5 s^3 + 2 C_5 L_5 g_m s^2 + C_5 C_L L_5 R_5 g_m s^3 + C_5 C_L L_5 R_5$$

**10.159** INVALID-ORDER-159 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_5 R_5 s^3 + C_2 L_5 s^2 + C_2 R_5 s + C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + R_5 g_m - 1\right)}{4 C_2 C_5 C_L L_5 L_L s^5 + C_2 C_5 C_L L_5 R_5 s^4 + 4 C_2 C_5 L_5 s^3 + 4 C_2 C_L L_5 s^3 + 4 C_2 C_L L_5 s^3 + 2 C_5 L_5 L_5 g_m s^4 + C_5 C_L L_5 R_5 g_m s^3 + C_5 C_L L_5 g_m s^2 + C_5 C_L L_5 g_m s^2 + C_5 C_L L_5 g_m s^2 + C_5 C_L L_5 g_m s^3 +$$

**10.160** INVALID-ORDER-160 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_5 R_5 s^3 + C_2 L_5 s^2 + C_2 R_5 s + C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 + L_5 g_m s + C_5 L_5 R_5 g_m s^2 - C_5 L_5 R_5 s^3 + C_2 C_5 L_5 L_5 R_5$$

10.161 INVALID-ORDER-161 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}C_{5}L_{5}R_{5}s^{3} + C_{2}L_{5}s^{2} + C_{2}R_{5}s + C_{5}L_{5}R_{5}g_{m}s^{2} - C_{2}R_{5}s^{2}\right)}{4C_{2}C_{5}C_{L}L_{5}L_{5}s^{5} + C_{2}C_{5}C_{L}L_{5}R_{5}s^{4} + 4C_{2}C_{5}L_{5}R_{5}s^{4} + 4C_{2}C_{5}L_{5}S^{3} + C_{2}C_{L}L_{5}s^{3} + 4C_{2}C_{L}L_{5}s^{3} + 4C_{2}C_{L}R_{5}s^{2} + 4C_{2}C_{L}R_{L}s^{2} + 4C_{2}s + 2C_{5}C_{L}L_{5}L_{2}g_{m}s^{4} + C_{5}C_{L}L_{5}R_{5}g_{m}s^{2} - C_{5}C_{L}L_{5}L_{5}R_{5}s^{4} + 4C_{2}C_{5}L_{5}R_{5}s^{4} + 4C_{2}C_{5}L_{5}R_{5}s^{4}$$

**10.162** INVALID-ORDER-162 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_5R_Ls^5 + C_2C_5L_5L_LR_5s^4 + 4C_2C_5L_5L_LR_Ls^4 + C_2C_5L_5R_5R_Ls^3 + C_2C_LL_5L_LR_5s^4 + C_2C_LL_LR_5s^3 + C_2L_5L_Ls^3 + C_2L_5R_Ls^2 + C_2L_LR_5s^2 + 4C_2L_LR_5s^2 + 4$$

**10.163** INVALID-ORDER-163 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_L L_L R_L s^2 + L_L s + C_2 C_5 C_L L_5 L_L R_L s^5 + 4 C_2 C_5 L_5 L_L s^4 + C_2 C_5 L_5 R_5 s^3 + 4 C_2 C_5 L_5 L_L s^4 + C_2 C_L L_L R_5 s^3 + 4 C_2 C_L R_5 s^3 + 4 C_2 C_L R_5 s^3 + 4 C_2 C_L R_5 r_L R_5 s^3 + 4 C_2 C_L R_5 r_L R_5 s^3 + 4 C_2 C_L R_5 r_L R_5 s^3 + 4 C_2 C_L$$

10.164 INVALID-ORDER-164 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_5s^5 + 4C_2C_5C_LL_5L_LR_Ls^5 + C_2C_5C_LL_5R_5R_Ls^4 + C_2C_5L_5R_5s^3 + 4C_2C_5L_5R_Ls^3 + C_2C_LL_5L_Ls^4 + C_2C_LL_5R_Ls^3 + C_2C_LL_LR_5s^3 + 4C_2C_LL_LR_Ls^3 + C_2C_LL_LR_Ls^3 + C_2C_LL_LR_Ls$$

10.165 INVALID-ORDER-165 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_5 s^3 + C_2 R_5 s + C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m - 1 \right)}{C_2 C_5 L_5 R_5 s^3 + 4 C_2 C_5 L_5 R_L s^3 + 4 C_2 C_5 R_5 R_L s^2 + C_2 R_5 s + 4 C_2 R_L s + C_5 L_5 R_5 g_m s^2 + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + 2 C_5 R_5 R_L g_m s + C_5 R_5 s + R_5 g_m + 2 R_L g_m + 1}$$

10.166 INVALID-ORDER-166 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5R_5s^3 + C_2R_5s + C_5L_5R_5g_ms^2 - C_5L_5s^2 - C_5R_5s + R_5g_m - 1}{C_2C_5C_LL_5R_5s^4 + 4C_2C_5L_5s^3 + 4C_2C_5R_5s^2 + C_2C_LR_5s^2 + 4C_2s + C_5C_LL_5R_5g_ms^3 + C_5C_LL_5s^3 + C_5C_LR_5s^2 + 2C_5L_5g_ms^2 + 2C_5R_5g_ms + C_LR_5g_ms + C_LR$$

10.167 INVALID-ORDER-167 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_5 s^3 + C_2 R_5 s + C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + R_5 g_m s^2 - C_5 R_5 g_m s^2 -$$

**10.168** INVALID-ORDER-168 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_5 R_5 s^3 + C_2 R_5 s + C_5 L_5 R_5 g_m s^2 - C_5 L_5 s^2 - C_5 R_5 s + C_5 L_5 R_5 g_m s^2 - C_5 L_5 R_5 s^2 + C_5 L_5 R_5 g_m s^2 - C_5 L_5 R_5 s^2 + C_5 L_5 R_5 g_m s^3 + C_5 L$$

10.169 INVALID-ORDER-169 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + \frac{1}{C_L s}\right)$$

10.170 INVALID-ORDER-170 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

10.171 INVALID-ORDER-171 
$$Z(s) = \left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_L R_L s + 1\right) \left(C_L$$

10.172 INVALID-ORDER-172 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_5R_Ls^5 + C_2C_5L_5L_LR_5s^4 + 4C_2C_5L_5L_LR_Ls^4 + C_2C_5L_5R_5R_Ls^3 + 4C_2C_5L_LR_5R_Ls^3 + C_2C_LL_LR_5R_Ls^3 + C_2L_LR_5s^2 + 4C_2L_LR_5s^2 + 4C_2L_LR_5s$$

10.173 INVALID-ORDER-173 
$$Z(s) = \left(\infty, \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_5s^5 + 4C_2C_5C_LL_5L_LR_5s^5 + 4C_2C_5C_LL_LR_5R_Ls^4 + 4C_2C_5L_5L_Ls^4 + 4C_2C_5L_5R_5s^3 + 4C_2C_5L_LR_5s^3 + 4C_2C_5L_LR_5s^3 + 4C_2C_5R_5R_Ls^2 + 4C_2C_5L_LR_5s^3 + 4$$

10.174 INVALID-ORDER-174 
$$Z(s) = \left(\infty, \ \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_5s^5 + 4C_2C_5C_LL_5L_LR_Ls^5 + C_2C_5C_LL_5R_5R_Ls^4 + 4C_2C_5C_LL_LR_5R_Ls^4 + C_2C_5L_5R_5s^3 + 4C_2C_5L_5R_Ls^3 + 4C_2C_5R_5R_Ls^2 + C_2C_LL_LR_5s^3 + 4C_2C_LL_LR_Ls^2 + C_2C_LL_LR_5s^3 + 4C_2C_5L_LR_Ls^3 +$$

10.175 INVALID-ORDER-175 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5, R_L\right)$$

$$H(s) = \frac{R_L (C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5)}{C_2 R_2 R_5 s + 4 C_2 R_2 R_L s + R_2 R_5 g_m + 2 R_2 R_L g_m + R_2 + R_5 + 4 R_L}$$

**10.176** INVALID-ORDER-176 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5\right)}{4C_2 C_L L_L R_2 s^3 + C_2 C_L R_2 R_5 s^2 + 4C_2 R_2 s + 2C_L L_L R_2 g_m s^2 + 4C_L L_L s^2 + C_L R_2 R_5 g_m s + C_L R_2 s + C_L R_5 s + 2R_2 g_m + 4C_L R_2 g_m s^2 + 4C_L R_2 g_m s$$

10.177 INVALID-ORDER-177 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5\right)}{C_2 C_L L_L R_2 R_5 s^3 + 4 C_2 L_L R_2 s^2 + C_2 R_2 R_5 s + C_L L_L R_2 R_5 g_m s^2 + C_L L_L R_2 s^2 + C_L L_L R_5 s^2 + 2 L_L R_2 g_m s + 4 L_L s + R_2 R_5 g_m + R_2 + R_5}$$

10.178 INVALID-ORDER-178 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5\right)}{4 C_2 C_L L_L R_2 s^3 + C_2 C_L R_2 R_5 s^2 + 4 C_2 C_L R_2 R_L s^2 + 4 C_2 L_L R_2 g_m s^2 + 4 C_L L_L s^2 + C_L R_2 R_5 g_m s + 2 C_L R_2 R_L g_m s + C_L R_2 s + C_L R_5 s + 4 C_L R_L s + 2 R_2 g_m + 4 C_L R_2 R_5 g_m s + 2 C_L R_2 R_2 R_5 g_m s + C_L R_2$$

10.179 INVALID-ORDER-179 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

**10.180** INVALID-ORDER-180 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}R_{2}s^{2} + L_{L}s + R_{L}\right)\left(C_{2}R_{2}R_{5}s + R_{2}R_{5}g_{m} - R_{2} + R_{5}\right)}{C_{2}C_{L}L_{L}R_{2}R_{5}s^{3} + 4C_{2}L_{L}R_{2}s^{2} + C_{2}R_{2}R_{5}s + 4C_{2}R_{2}R_{L}s + C_{L}L_{L}R_{2}R_{5}g_{m}s^{2} + 2C_{L}L_{L}R_{2}R_{2}g_{m}s^{2} + C_{L}L_{L}R_{2}s^{2} + 4C_{L}L_{L}R_{2}s^{2} +$$

10.181 INVALID-ORDER-181 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ R_5, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5 \right)}{C_2 C_L L_L R_2 R_5 s^3 + 4 C_2 C_L L_L R_2 R_5 s^3 + C_2 C_L R_2 R_5 R_L s^2 + C_2 R_2 R_5 s + 4 C_2 R_2 R_L s + C_L L_L R_2 R_5 g_m s^2 + 2 C_L L_L R_2 R_2 g_m s^2 + C_L L_L R_2 s^2 + C_L L_L R_2$$

**10.182** INVALID-ORDER-182 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2R_2s - C_5R_2s + R_2g_m + 1}{s\left(4C_2C_5R_2s + C_2C_LR_2s + C_5C_LR_2s + 2C_5R_2g_m + 4C_5 + C_LR_2g_m + C_L\right)}$$

**10.183** INVALID-ORDER-183 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 R_2 s - C_5 R_2 s + R_2 g_m + 1\right)}{s \left(4C_2 C_5 C_L R_2 R_L s^2 + 4C_2 C_5 R_2 s + C_2 C_L R_2 s + 2C_5 C_L R_2 R_L g_m s + C_5 C_L R_2 s + 4C_5 C_L R_L s + 2C_5 R_2 g_m + 4C_5 + C_L R_2 g_m + C_L\right)}$$

**10.184** INVALID-ORDER-184 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 R_2 s - C_5 R_2 s + R_2 g_m + 1\right)}{s \left(4C_2 C_5 C_L L_L R_2 s^3 + 4C_2 C_5 R_2 s + C_2 C_L R_2 s + 2C_5 C_L L_L R_2 g_m s^2 + 4C_5 C_L L_L s^2 + C_5 C_L R_2 s + 2C_5 R_2 g_m + 4C_5 + C_L R_2 g_m + C_L\right)}$$

**10.185** INVALID-ORDER-185 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 R_2 s - C_5 R_2 s + R_2 g_m + 1\right)}{4 C_2 C_5 L_L R_2 s^3 + C_2 C_L L_L R_2 s^3 + C_5 C_L L_L R_2 s^3 + 2 C_5 L_L R_2 g_m s^2 + 4 C_5 L_L s^2 + C_5 R_2 s + C_L L_L R_2 g_m s^2 + C_L L_L s^2 + R_2 g_m + 1}$$

**10.186** INVALID-ORDER-186 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}R_{2}s - C_{5}R_{2}s + R_{2}g_{m} + 1\right)}{s\left(4C_{2}C_{5}C_{L}L_{L}R_{2}s^{3} + 4C_{2}C_{5}C_{L}R_{2}s + 4C_{2}C_{5}R_{2}s + C_{2}C_{L}R_{2}s + 2C_{5}C_{L}L_{L}R_{2}g_{m}s^{2} + 4C_{5}C_{L}L_{L}s^{2} + 2C_{5}C_{L}R_{2}s + 4C_{5}C_{L}R_{2}s + 4C_{5}C_{L}$$

10.187 INVALID-ORDER-187 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 R_2 s - C_5 R_2 s + R_2 g_m + 1\right)}{4 C_2 C_5 L_L R_2 R_L s^3 + C_2 C_L L_L R_2 R_L s^3 + C_2 L_L R_2 s^2 + C_2 R_2 R_L s + C_5 C_L L_L R_2 R_L s^3 + 2 C_5 L_L R_2 R_L g_m s^2 + C_5 L_L R_2 s^2 + 4 C_5 L_L R_2 s^2 + C_5 R_2 R_L s + C_L L_L R_2 R_L g_m s^2 + C_L R_2 R_L s^3 + C_L R_2 R_L s^3$$

**10.188** INVALID-ORDER-188 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}R_{L}s^{2} + L_{L}s + R_{L}\right)\left(C_{2}R_{2}s - C_{5}R_{2}s + R_{2}g_{m} + 1\right)}{4C_{2}C_{5}C_{L}L_{L}R_{2}s^{4} + 4C_{2}C_{5}L_{L}R_{2}s^{3} + 4C_{2}C_{5}R_{2}R_{L}s^{2} + C_{2}C_{L}L_{L}R_{2}s^{3} + C_{5}C_{L}L_{L}R_{2}s^{3} + C_{5}C_{L}L_{L}R_{2}s^{3} + 4C_{5}C_{L}L_{L}R_{2}s^{3} + 4C_{5}C_{L}L_{L}R_{2}s^{3} + 4C_{5}L_{L}R_{2}s^{3} + 4C_{5}L_$$

10.189 INVALID-ORDER-189 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( C_2 R_2 s - C_5 R_2 s + R_2 g_m + 1 \right)}{4 C_2 C_5 C_L L_L R_2 R_L s^4 + 4 C_2 C_5 R_2 R_L s^2 + C_2 C_L L_L R_2 s^3 + C_2 C_L R_2 R_L s^2 + C_2 R_2 s + 2 C_5 C_L L_L R_2 R_L g_m s^3 + C_5 C_L L_L R_2 s^3 + 4 C_5 C_L L_L R_2 s^3 + C_5 C_L R_2 R_L s^2 + 2 C_5 R_2 R_L g_m s^3 + C_5 C_L R_2 R_L s^3 + C_5 C_L R_2 R_L s^2 + C_5 R_L s^$$

**10.190** INVALID-ORDER-190 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$$

**10.191** INVALID-ORDER-191 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + 1\right)\left(C_{2}R_{2}R_{5}s - C_{5}R_{2}R_{5}s + R_{2}R_{5}g_{m} - R_{2} + R_{5}\right)}{4C_{2}C_{5}C_{L}L_{L}R_{2}R_{5}s^{4} + 4C_{2}C_{5}R_{2}R_{5}s^{2} + 4C_{2}C_{L}L_{L}R_{2}s^{3} + C_{2}C_{L}R_{2}R_{5}s^{2} + 4C_{2}R_{2}s + 2C_{5}C_{L}L_{L}R_{2}R_{5}g_{m}s^{3} + 4C_{5}C_{L}L_{L}R_{5}s^{3} + C_{5}C_{L}R_{2}R_{5}s^{2} + 2C_{5}R_{2}R_{5}g_{m}s + 4C_{5}R_{5}s + 2C_{5}R_{2}R_{5}s^{2} + 4C_{5}R_{2}R_{5}s^{2} + 4C_{5}R_{2}R_{5}s^{2} + 4C_{5}R_{2}R_{5}s^{2} + 4C_{5}R_{5}R_{5}s^{2} + 4C_{5}R_{5}s^{2} + 4C$$

**10.192** INVALID-ORDER-192 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 R_2 R_5 s - C_5 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5\right)}{4 C_2 C_5 L_L R_2 R_5 s^3 + C_2 C_L L_L R_2 R_5 s^3 + 4 C_2 L_L R_2 s^2 + C_2 R_2 R_5 s + C_5 C_L L_L R_2 R_5 s^3 + 2 C_5 L_L R_2 R_5 g_m s^2 + 4 C_5 L_L R_5 s^2 + C_5 R_2 R_5 s + C_L L_L R_2 R_5 g_m s^2 + C_L R_2 R_5 g_m s^$$

**10.193** INVALID-ORDER-193 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

**10.194** INVALID-ORDER-194 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2R_2s+1}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ \frac{1}{C_Ls+\frac{1}{R_L}+\frac{1}{L_Ls}}\right)$$

 $H(s) = \frac{L_L R_L s \left(C_2 R_2 R_5 s - C_5 R_2 R_2 R_3 r_1 + C_2 C_L L_L R_2 R_5 R_L s^3 + C_2 L_L R_2 R_5 s^2 + 4 C_2 L_L R_2 R_5 r_1 s^2 + C_2 R_2 R_5 R_L s^3 + 2 C_5 L_L R_2 R_5 R_L s^3 + 2 C_5 L_L R_2 R_5 R_L s^3 + C_5 L_L R_2 R_5 r_2 R_2 R_5 r_2 R_2 R_5 R_L s^3 + C_5 L_L R$ 

10.195 INVALID-ORDER-195 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{4C_2C_5C_LL_LR_2R_5R_Ls^4 + 4C_2C_5L_LR_2R_5s^3 + 4C_2C_5R_2R_5R_Ls^2 + C_2C_LL_LR_2R_5s^3 + 4C_2C_LL_LR_2R_2s^3 + 4C_2L_LR_2s^3 + 4C_2L_LR_2s^2 + C_2R_2R_5s + 4C_2R_2R_Ls + 2C_5C_LL_LR_2R_5R_Ls^3 + 4C_2C_LL_LR_2R_5s^3 + 4C_2C_LL_LR_2R_5s^3 + 4C_2C_LL_LR_2s^3 + 4C_2C_LLR_2s^3 + 4C_2C_LL_LR_2s^3 + 4C_2C$$

10.196 INVALID-ORDER-196 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{4C_2C_5C_LL_LR_2R_5R_Ls^4 + 4C_2C_5R_2R_5R_Ls^2 + C_2C_LL_LR_2R_5s^3 + 4C_2C_LL_LR_2R_Ls^3 + C_2C_LR_2R_5R_Ls^2 + C_2R_2R_5s + 4C_2R_2R_Ls + 2C_5C_LL_LR_2R_5R_Ls^3 + C_5C_LL_LR_2R_5s^3 + 4C_2C_LL_LR_2R_5s^3 + 4C_2C_LL_LR_2R_5s^2$$

10.197 INVALID-ORDER-197 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5R_2R_5s^2 + C_2R_2s + C_5R_2R_5g_ms - C_5R_2s + C_5R_5s + R_2g_m + 1}{s\left(C_2C_5C_LR_2R_5s^2 + 4C_2C_5R_2s + C_2C_LR_2s + C_5C_LR_2R_5g_ms + C_5C_LR_2s + C_5C$$

**10.198** INVALID-ORDER-198 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_2 s + C_5 R_2 s + R_2 g_m + 1 \right)}{C_2 C_5 C_L R_2 R_5 s^3 + C_2 C_5 R_2 R_5 s^2 + 4 C_2 C_5 R_2 R_L s^2 + C_2 C_L R_2 R_L s^2 + C_5 C_L R_2 R_5 R_L g_m s^2 + C_5 C_L R_2 R_L s^2 + C_5 C_L R_5 R_L s^2 + C_5 R_2 R_5 g_m s + 2 C_5 R_5 R_5 g_m$$

**10.199** INVALID-ORDER-199 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{s \left(C_2 C_5 C_L R_2 R_5 s^2 + 4 C_2 C_5 C_L R_2 R_L s^2 + 4 C_2 C_5 R_2 s + C_5 C_L R_2 s + C_5 C_L R_2 R_5 g_m s + 2 C_5 C_L R_2 R_L g_m s + C_5 C_L R_2 s + C_5 C_L R_2 s + 4 C_5 C_L R_2 s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m s + 2 C_5 C_L R_2 R_2 g_m s + 2 C_5 C_L R_2$$

**10.200** INVALID-ORDER-200 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{s \left(4 C_2 C_5 C_L L_L R_2 s^3 + C_2 C_5 C_L R_2 R_5 s^2 + 4 C_2 C_5 R_2 s + C_2 C_L R_2 s + 2 C_5 C_L L_L R_2 g_m s^2 + 4 C_5 C_L L_L s^2 + C_5 C_L R_2 R_5 g_m s + C_5 C_L R_2 s + C_5 C_L R_2 s + 2 C_5 R_2 g_m + 4 C_5 + C_L R_2 g_m s^2 + 4 C_5 C_L R_2 R_5 g_m s + C_5 C_L R_2 R_5 g_m s +$$

10.201 INVALID-ORDER-201 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{C_2 C_5 C_L L_L R_2 R_5 s^4 + 4 C_2 C_5 L_L R_2 s^3 + C_2 C_5 L_L R_2 s^3 + C_2 C_L L_L R_2 s^3 + C_5 C_L L_$$

10.202 INVALID-ORDER-202 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1\right)}{s \left(4 C_2 C_5 C_L L_L R_2 s^3 + C_2 C_5 C_L R_2 R_5 s^2 + 4 C_2 C_5 C_L R_2 R_5 s^2 + 4 C_2 C_5 C_L R_2 R_5 s^2 + 4 C_2 C_5 R_5 R_5 s^2 + 4 C_2 C_5 R_5 R_5 s^2 + 4 C_2 C_5 R_5 R_5 s^2 + 4 C_2 R_5 R_5 s^2 + 4 C_2 R_5 R_5$$

10.203 INVALID-ORDER-203 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 C_5 R_2 R_3 + C_2 C_5 L_L R_2 R_5 s^3 + 4 C_2 C_5 L_L R_2 R_L s^3 + C_2 C_5 R_2 R_5 R_L s^2 + C_2 C_L L_L R_2 R_L s^3 + C_2 L_L R_2 s^2 + C_2 R_2 R_L s + C_5 C_L L_L R_2 R_5 R_L s^3 + C_5 C_L L_L R_2 R_L s^3 + C_5 C_L L_L R_2$$

**10.204** INVALID-ORDER-204 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_2 C_5 R_2 R_5 s^2 + C_2 C_2 L_L R_2 R_5 s^2 + C_2 C_2 L_L R_2 R_5 s^2 + C_2 C_2 L_L R_2 R_5 s^4 + C_2 C_5 C_L L_L R_2 R_5 s^4 + C_2 C_5 L_L R_2 R_5 s^3 + C_2 C_5 R_2 R_5 s^2 + C_2 C_2 L_L R_2 R_5 s^3 + C_2 R_2 R_5 r^3 + C_2 R_2 R_5 r$$

$$H(s) = \frac{1}{C_2C_5C_LL_LR_2R_5s^4 + 4C_2C_5C_LL_LR_2R_Ls^4 + 4C_2C_5L_LR_2s^3 + C_2C_5R_2R_5s^2 + 4C_2C_5R_2R_Ls^2 + C_2C_LL_LR_2s^3 + C_2R_2s + C_5C_LL_LR_2R_5g_ms^3 + 2C_5C_LL_LR_2R_2g_ms^3 + C_5C_LL_LR_2R_5g_ms^3 + C_5C_LL_LR_2g_ms^3 + C_5C_LLR_2g_ms^3 + C_5C_LL_LR_2g_ms^3 + C_5C_LLR_2g_ms^3 + C_5C_LLR_2$$

10.205 INVALID-ORDER-205 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L(s)}{C_2C_5C_LL_LR_2R_5s^4 + 4C_2C_5C_LL_LR_2R_Ls^4 + C_2C_5C_LR_2R_5R_Ls^3 + C_2C_5R_2R_5s^2 + 4C_2C_5R_2R_Ls^2 + C_2C_LL_LR_2s^3 + C_2C_LR_2R_Ls^2 + C_2R_2s + C_5C_LL_LR_2R_5g_ms^3 + 2C_5C_LR_2R_5g_ms^3 +$$

**10.206** INVALID-ORDER-206 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 s^3 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1 \right)}{C_2 C_5 L_5 R_2 s^3 + 4 C_2 C_5 R_2 R_L s^2 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + 4 C_5 R_L s + R_2 g_m + 1}$$

10.207 INVALID-ORDER-207 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5R_2s^3 + C_2R_2s + C_5L_5R_2g_ms^2 + C_5L_5s^2 - C_5R_2s + R_2g_m + 1}{s\left(C_2C_5C_LL_5R_2s^3 + 4C_2C_5R_2s + C_2C_LR_2s + C_5C_LL_5R_2g_ms^2 + C_5C_LL_5s^2 + C_5C_LR_2s + 2C_5R_2g_m + 4C_5 + C_LR_2g_m + C_L\right)}$$

**10.208** INVALID-ORDER-208 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 s^3 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1 \right)}{C_2 C_5 C_L L_5 R_2 R_L s^4 + C_2 C_5 L_5 R_2 s^3 + 4 C_2 C_5 R_2 R_L s^2 + C_2 C_L R_2 R_L s^2 + C_5 C_L L_5 R_2 R_L g_m s^3 + C_5 C_L L_5 R_2 R_L s^3 + C_5 C_L R_2 R_L s^2 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 R_2 g_m$$

**10.209** INVALID-ORDER-209 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_5 R_2 s^3 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1\right)}{s \left(C_2 C_5 C_L L_5 R_2 s^3 + 4 C_2 C_5 C_L R_2 R_L s^2 + 4 C_2 C_5 R_2 s + C_2 C_L R_2 s + C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L L_5 s^2 + 2 C_5 C_L R_2 R_L g_m s + C_5 C_L R_2 s + 4 C_5 C_L R_$$

**10.210** INVALID-ORDER-210 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{S}^{2}+1\right)\left(C_{2}C_{5}L_{5}R_{2}s^{3}+C_{2}R_{2}s+C_{5}L_{5}R_{2}g_{m}s^{2}+C_{5}L_{5}s^{2}-C_{5}R_{2}s+R_{2}g_{m}+1\right)}{s\left(C_{2}C_{5}C_{L}L_{5}R_{2}s^{3}+4C_{2}C_{5}R_{2}s+C_{2}C_{L}R_{2}s+C_{5}C_{L}L_{5}R_{2}g_{m}s^{2}+C_{5}C_{L}L_{5}R_{2}g_{m}s^{2}+4C_{5}C_{L}L_{L}s^{2}+C_{5}C_{L}R_{2}s+2C_{5}R_{2}g_{m}+4C_{5}+C_{L}R_{2}s^{2}+C_{5}C_{L}R_{2}$$

10.211 INVALID-ORDER-211 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_5 R_2 s^3 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1\right)}{C_2 C_5 C_L L_5 L_L R_2 s^5 + C_2 C_5 L_5 R_2 s^3 + 4 C_2 C_5 L_L R_2 s^3 + C_2 C_L L_L R_2 s^3 + C_2 R_2 s + C_5 C_L L_5 L_L R_2 g_m s^4 + C_5 C_L L_L L_2 s^3 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + 2 C_5 L_L R_2 g_m s^2 + C_5 L_5 R_2 g_$$

10.212 INVALID-ORDER-212 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 C_5 L_5 R_2 s^3 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 - C_5 R_2 s + R_2 g_m + 1\right)}{s \left(C_2 C_5 C_L L_5 R_2 s^3 + 4 C_2 C_5 C_L L_L R_2 s^3 + 4 C_2 C_5 C_L R_2 R_L s^2 + 4 C_2 C_5 R_2 s + C_2 C_L R_2 s + C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L L_5 R_2 g_m s^2 + 4 C_5 C_L L_L R_2 g_m s^2 + 4 C_5 C_L L_L R_2 g_m s^2 + 4 C_5 C_L L_L R_2 g_m s^2 + C_5 C_L R_2 R_L R_2 g_m s^2 + C_5 C_L R_2 R_2 g_m s^2$$

10.213 INVALID-ORDER-213 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 C_5 L_5 L_1 + C_2 C_5 L_5 L_1 R_2 s^4 + C_2 C_5 L_5 R_2 R_L s^3 + 4 C_2 C_5 L_1 R_2 R_L s^3 + C_2 C_L L_L R_2 R_L s^3 + C_2 L_L$$

**10.214** INVALID-ORDER-214 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_2 C_5 L_5 R_2 s^3 + C_2 R_2 R_2 s^4 + C_2 C_5 L_L R_2 R_2 s^4 + C_2 C_5 L_L R_2 R_2 s^3 + C_2 R_2 R_2 s^4 + C_2 C_5 L_L R_2 R$$

10.215 INVALID-ORDER-215 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L(s)}{C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5R_2R_Ls^4 + 4C_2C_5C_LL_LR_2R_Ls^4 + C_2C_5L_5R_2s^3 + 4C_2C_5R_2R_Ls^2 + C_2C_LL_LR_2s^3 + C_2C_LR_2R_Ls^2 + C_2R_2s + C_5C_LL_5L_LR_2g_ms^4 + C_5C_LL_5R_2R_Ls^2 + C_4R_2R_Ls^2 + C_4R_2R_Ls^$$

**10.216** INVALID-ORDER-216 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$$

10.217 INVALID-ORDER-217 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2L_5R_2s^2 - C_5L_5R_2s^2 + L_5R_2g_ms + L_5s - R_2}{4C_2C_5L_5R_2s^3 + C_2C_LL_5R_2s^3 + 4C_2R_2s + C_5C_LL_5R_2s^3 + 2C_5L_5R_2g_ms^2 + 4C_5L_5s^2 + C_LL_5R_2g_ms^2 + C_LL_5s^2 + C_LL_5s^2 + C_LR_2s + 2R_2g_m + 4C_5R_2s^2 + C_LL_5s^2 + C_LL_5s$$

**10.218** INVALID-ORDER-218 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 L_5 R_2 s^2 - C_5 L_5 R_2 s^2 + L_5 R_2 g_m s + L_5 s - R_2 \right)}{4 C_2 C_5 L_5 R_2 R_L s^3 + C_2 C_L L_5 R_2 R_L s^3 + C_2 L_5 R_2 s^2 + 4 C_2 R_2 R_L s + C_5 C_L L_5 R_2 R_L s^3 + 2 C_5 L_5 R_2 R_L g_m s^2 + C_5 L_5 R_2 s^2 + 4 C_5 L_5 R_L s^2 + C_L L_5 R_2 R_L g_m s^2 + C_L L_5 R_$$

**10.219** INVALID-ORDER-219 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 L_5 R_2 s^2 - C_5 L_5 R_2 s^2 + L_5 R_2 g_m s + L_5 s - R_2\right)}{4 C_2 C_5 C_L L_5 R_2 R_L s^4 + 4 C_2 C_5 L_5 R_2 s^3 + C_2 C_L L_5 R_2 s^3 + 4 C_2 C_L R_2 R_L s^2 + 4 C_2 R_2 s + 2 C_5 C_L L_5 R_2 R_L g_m s^3 + C_5 C_L L_5 R_2 s^3 + 4 C_5 C_L L_5 R_2 g_m s^2 + 4 C_5 L_5 R_2 g_m s^2$$

10.220 INVALID-ORDER-220 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 L_5 R_2 s^2 - C_5 L_5 R_2 s^2 + L_5 R_2 g_m s + L_5 s - R_2\right)}{4 C_2 C_5 C_L L_5 L_L R_2 s^5 + 4 C_2 C_5 L_5 R_2 s^3 + C_2 C_L L_5 R_2 s^3 + 4 C_2 C_L L_L R_2 s^3 + 4 C_2 R_2 s + 2 C_5 C_L L_5 L_L R_2 g_m s^4 + 4 C_5 C_L L_5 L_L s^4 + C_5 C_L L_5 R_2 s^3 + 2 C_5 L_5 R_2 g_m s^2 + 4 C_5 L_5 R_2 s^3 + 2 C_5 L_5 R_2 g_m s^2 + 4 C_5 L_5 R_2 s^3 + 2 C_5 L_5 R_2 g_m s^2 + 4 C_5 L_$$

10.221 INVALID-ORDER-221 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 L_5 R_2 s^2 - C_5 L_5 R_2 s^2 + L_5 R_2 g_m s + L_5 s - R_2\right)}{4 C_2 C_5 L_5 L_L R_2 s^4 + C_2 C_L L_5 L_L R_2 s^2 + 4 C_2 L_L R_2 s^2 + C_5 C_L L_5 L_L R_2 s^4 + 2 C_5 L_5 L_L R_2 g_m s^3 + 4 C_5 L_5 L_L s^3 + C_5 L_5 R_2 s^2 + C_L L_5 L_L R_2 g_m s^3 + C_L L_5 L_L R_2 s^4 + C_5 L_5 L_L R_2 g_m s^3 + C_5 L_5 R_2 s^2 + C_5 L_5 R_$$

10.222 INVALID-ORDER-222 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 L_L s^2 + C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2$$

10.223 INVALID-ORDER-223 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 L_5 R_2 s^2 - C_5 L_5 R_2 R_2 s^2 - C_5$$

10.224 INVALID-ORDER-224 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{4C_2C_5C_LL_5L_LR_2R_Ls^5 + 4C_2C_5L_5L_LR_2s^4 + 4C_2C_5L_5R_2R_Ls^3 + C_2C_LL_5L_LR_2s^4 + 4C_2C_LL_LR_2R_Ls^3 + C_2L_5R_2s^2 + 4C_2L_LR_2s^2 + 4C_2R_2R_Ls + 2C_5C_LL_5L_LR_2R_Ls^3 + C_2L_5R_2s^2 + 4C_2L_LR_2s^2 + 4C_2L_LR$$

10.225 INVALID-ORDER-225 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

**10.226** INVALID-ORDER-226 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 s^3 + C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m + 1 \right)}{C_2 C_5 L_5 R_2 s^3 + C_2 C_5 R_2 R_5 s^2 + 4 C_2 C_5 R_2 R_L s^2 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + C_5 R_5 s + 4 C_5 R_L s + R_2 g_m + 1}$$

10.227 INVALID-ORDER-227 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5R_2s^3 + C_2C_5R_2R_5s^2 + C_2R_2s + C_5L_5R_2g_ms^2 + C_5L_5s^2 + C_5R_2R_5g_ms - C_5R_2s + C_5R_5s + R_2g_m + 1}{s\left(C_2C_5C_LL_5R_2s^3 + C_2C_5C_LR_2R_5s^2 + 4C_2C_5R_2s + C_2C_LR_2s + C_5C_LL_5R_2g_ms^2 + C_5C_LL_5s^2 + C_5C_LR_2s + C_5C_LR_2$$

10.228 INVALID-ORDER-228 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

10.229 INVALID-ORDER-229 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_5 R_2 s^3 + C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_5 s + R_2 g_m s^2 + C_5 C_L L_5 R_2 s^3 + C_2 C_5 C_L R_2 R_5 s^2 + 4 C_2 C_5 R_2 R_2 s^2 + 4 C_2 C_5 R_2 s + C_2 C_L R_2 s + C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L L_5 R_2 g_m s^2 + C_5 C_L R_2 R_5 g_m s + 2 C_5 C_L R_2 R_4 g_m s + C_5 C_L R_2 R_5 s^2 + C_5 C_L R_2 R_5 g_m s^2 + C_5 C_L R_2 R_5 g_m s + C$$

**10.230** INVALID-ORDER-230 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

10.231 INVALID-ORDER-231 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_5 R_2 s^3 + C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_2 C_5 L_L R_2 s^3 + C$$

10.232 INVALID-ORDER-232 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 C_5 L_5 R_2 s^3 + C_2 C_5 R_2 R_5 s^2 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 s^2 + C_5 R_2 R_2 R_2 s^2 + C_5 R_2 R_2 s^2$$

10.233 INVALID-ORDER-233 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

10.234 INVALID-ORDER-234 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{(C_L L_L R_L s^2 + L_L R_2 s^3 + C_2 C_5 C_L L_L R_2 R_5 s^4 + 4 C_2 C_5 C_L L_L R_2 R_L s^4 + C_2 C_5 L_5 R_2 s^3 + 4 C_2 C_5 L_L R_2 s^3 + C_2 C_5 R_2 R_5 s^2 + 4 C_2 C_5 R_2 R_L s^2 + C_2 C_L L_L R_2 s^3 + C_2 R_2 s + C_5 C_L L_5 L_L R_2 s^3 + C_2 R_2 s^$$

10.235 INVALID-ORDER-235 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

10.236 INVALID-ORDER-236 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$$

10.237 INVALID-ORDER-237 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2L_5R_2R_5s^2 - C_5L_5R_2R_5s^2 + L_5R_2R_5g_ms - L_5R_2s + L_5R_5s - R_2R_5}{4C_2C_5L_5R_2R_5s^3 + C_2C_LL_5R_2s^2 + 4C_2R_2s^2 + 4C_2R_2s + C_5C_LL_5R_2s^3 + 2C_5L_5R_2R_5g_ms^2 + 4C_5L_5R_2s^2 + C_LL_5R_2s^2 + C_LL_$$

10.238 INVALID-ORDER-238 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$$

10.239 INVALID-ORDER-239 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{(C_L R_L s + 1) \left( C_L R_L s + \frac{1}{4} \right) \left( C_L R_L s + \frac{$ 

10.240 INVALID-ORDER-240 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{\left(C_L L_L s^2 + 1\right)\left(C_L L_L s^2 + 1\right)\left($ 

10.241 INVALID-ORDER-241 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

**10.242** INVALID-ORDER-242 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{1}{4C_2C_5C_LL_5L_LR_2R_5s^5 + 4C_2C_5C_LL_5R_2R_5R_Ls^4 + 4C_2C_5L_5R_2R_5s^3 + 4C_2C_LL_5L_Rs^4 + C_2C_LL_5R_2R_5s^3 + 4C_2C_LL_5R_2R_5s^3 + 4C_2C_LL_5R_5s^3 + 4C_2C_LL_5R_5s^3 + 4C_2C_LL_5R_5s^3 + 4C_2C_LL_5R_5s^3 + 4C_2C_LL_5R_5s^3 + 4C_2C_LL_5R_5s^$ 

10.243 INVALID-ORDER-243 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

10.244 INVALID-ORDER-244 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{4C_2C_5C_LL_5L_LR_2R_5R_Ls^5 + 4C_2C_5L_5L_LR_2R_5s^4 + 4C_2C_5L_5R_2R_5R_Ls^3 + C_2C_LL_5L_LR_2R_5s^4 + 4C_2C_LL_5L_LR_2R_5R_Ls^4 + 4C_2C_LL_LR_2R_5R_Ls^3 + 4C_2L_5L_LR_2s^3 + C_2L_5R_2R_5R_Ls^3 + 4C_2L_5L_LR_2s^3 + C_2L_5L_LR_2s^3 + C_2L_5R_2s^3 + C_2L_5R_2s^3$$

10.245 INVALID-ORDER-245 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{4C_2C_5C_LL_5L_LR_2R_5R_Ls^5 + 4C_2C_5L_5R_2R_5R_Ls^3 + C_2C_LL_5L_LR_2R_5s^4 + 4C_2C_LL_5L_LR_2R_Ls^4 + C_2C_LL_5R_2R_5R_Ls^3 + 4C_2C_LL_4R_2R_5R_Ls^3 + C_2L_5R_2R_5s^2 + 4C_2L_5R_2R_5R_Ls^3 + 4C_2C_LL_5R_2R_5R_Ls^3 + 4C_2C_LL_5R_2R_5$$

**10.246** INVALID-ORDER-246 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$$

10.247 INVALID-ORDER-247 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5R_2R_5s^3 + C_2L_5R_2s^2 + C_2R_2R_5s + C_5L_5R_2g_ms^2 - C_5L_5R_2s^2 + C_5L_5R_2s^2 + L_5R_2g_ms + L_5s + R_2R_5g_ms^2}{C_2C_5C_LL_5R_2s^3 + 4C_2C_5L_5R_2s^3 + C_2C_LL_5R_2s^3 + C_2C_LL_5R_2s^3 + C_5C_LL_5R_2s^3 + C_5C_LL_5R$$

**10.248** INVALID-ORDER-248 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 R_5 s^3 + C_2 I_3 R_2 R_5 r_3 + C_2 C_2 L_5 R_2 R_2 r_3 + C_2 C_2 L_5 R_2 r_3 + C_2 C_$$

10.249 INVALID-ORDER-249 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$$

10.250 INVALID-ORDER-250 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$$

10.251 INVALID-ORDER-251 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

10.252 INVALID-ORDER-252 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s^2 + C_L C_L L_L R_L s^3 + C_2 C_L L_L R_2 s^5 + C_2 C_5 C_L L_5 R_2 R_5 s^4 + 4 C_2 C_5 L_L R_2 s^3 + C_2 C_L L_5 R_2 s^3 + 4 C_2 C_L L_L R_2 s^3 + C_2 C_L R_2 R_5 s^2 + 4 C_2 C_L R_2 R_L s^2 + 4 C_2 R_2 R_2 s^2 + 2 C_5 C_L R_2 R_2 s^3 + C_5 C_L R_2 r$$

10.253 INVALID-ORDER-253 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

10.254 INVALID-ORDER-254 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5s^5 + 4C_2C_5C_LL_5L_LR_2R_Ls^5 + 4C_2C_5L_5L_LR_2s^4 + C_2C_5L_5R_2R_5s^3 + 4C_2C_5L_5R_2R_Ls^3 + C_2C_LL_5L_LR_2s^4 + C_2C_LL_LR_2R_5s^3 + 4C_2C_LL_LR_2R_5s^3 +$$

10.255 INVALID-ORDER-255 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5s^5 + 4C_2C_5C_LL_5L_LR_2R_Ls^5 + C_2C_5C_LL_5R_2R_5R_Ls^4 + C_2C_5L_5R_2R_5s^3 + 4C_2C_5L_5R_2R_Ls^3 + C_2C_LL_5L_LR_2s^4 + C_2C_LL_5R_2R_Ls^3 + C_2C_LL_5R_2R_Ls^3 + C_2C_LL_5R_2R_2s^3 + C_2C_LL_5R_2R_2s^2 + C_2C_LL_5R_2R_2s^2 + C_2C_LL_5R_2R_2s^2 + C_2C_LL_5R_2s^2 + C_2C_LL_5R_2s^2 + C_2C_LL_5R_2s^2 + C_2C_$$

10.256 INVALID-ORDER-256 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 R_5 s^3 + C_2 R_2 R_5 s + C_5 L_5 R_2 R_5 g_m s^2 - C_5 L_5 R_2 s^2 + C_5 L_5 R_5 s^2 - C_5 R_2 R_5 s + R_2 R_5 g_m - C_5 R_2 R_5 r_3 + 4 C_2 C_5 R_2 R_5 r_4 R_5 r_5 R_2 R_5 r_5 + 4 C_2 R_2 R_5 r_5 + 4 C_2 R_2 R_5 r_5 R_5 r_5 R_2 R_5 r_5 R_5 r_5 R_2 R_5 R_$$

10.257 INVALID-ORDER-257 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5R_2R_5s^3 + C_2R_2R_5s + C_5L_5R_2R_5g_ms^2 - C_5L_5R_2s^2 + C_5L_5R_2s^2 + C_5L_5R_5s^2 - C_5R_2R_5s + R_2R_5g_ms^2}{C_2C_5C_LL_5R_2R_5s^4 + 4C_2C_5L_5R_2s^3 + 4C_2C_5R_2R_5s^2 + 4C_2R_2s + C_5C_LL_5R_2s^3 +$$

10.258 INVALID-ORDER-258 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 R_5 R_L s^4 + C_2 C_5 L_5 R_2 R_5 s^3 + 4 C_2 C_5 L_5 R_2 R_L s^3 + 4 C_2 C_5 R_2 R_5 R_L s^2 + C_2 C_L R_2 R_5 R_L s^2 + C_2 R_2 R_5 s + 4 C_2 R_2 R_L s + C_5 C_L L_5 R_2 R_5 R_L s^3 + C_5 C_L L_5 R_2 R_L s^3 + C_5 C_L L_5 R_2 R_5 R_L s^3 + C_5 C_L L_5 R_$$

10.259 INVALID-ORDER-259 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_L s}\right)$$

10.260 INVALID-ORDER-260 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2R_2s+1}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, \ L_Ls+\frac{1}{C_Ls}\right)$$

10.261 INVALID-ORDER-261 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

10.262 INVALID-ORDER-262 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{1}{4C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5R_2R_5s^4 + 4C_2C_5C_LL_5R_2R_Ls^4 + 4C_2C_5C_LL_LR_2R_5s^4 + 4C_2C_5C_LR_2R_5R_Ls^3 + 4C_2C_5L_5R_2s^3 + 4C_2C_5R_2R_5s^2 + 4C_2C_LL_LR_2s^3 + C_2C_LL_LR_2s^3 + C_2C_LL_LR_2s^3$$

10.263 INVALID-ORDER-263 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2 R_2 s + 1}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5R_Ls^5 + C_2C_5L_5L_LR_2R_5s^4 + 4C_2C_5L_5L_LR_2R_Ls^4 + C_2C_5L_5R_2R_5R_Ls^3 + 4C_2C_5L_LR_2R_5R_Ls^3 + C_2C_LL_LR_2R_5R_Ls^3 + C_2L_LR_2R_5s^2 + 4C_2L_LR_2R_5s^2 + 4C_2LR_2R_5s^2 + 4C_2L_LR_2R_5s^2 + 4C_2L_2R_5s^2 + 4C_2$$

10.264 INVALID-ORDER-264 
$$Z(s) = \left(\infty, \frac{R_2}{C_2 R_2 s + 1}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5s^5 + 4C_2C_5C_LL_5L_LR_2R_Ls^5 + 4C_2C_5C_LL_LR_2R_5R_Ls^4 + 4C_2C_5L_5L_LR_2s^4 + C_2C_5L_5R_2R_5s^3 + 4C_2C_5L_5R_2R_Ls^3 + 4C_2C_5L_LR_2R_5s^3 + 4C_2C_5R_2R_5R_Ls^4 + 4C_2C_5L_LR_2R_5s^4 + 4C_2C_5L_LR_2R_5s^3 + 4C_2C_5L_LR_2R$$

10.265 INVALID-ORDER-265 
$$Z(s) = \left(\infty, \ \frac{R_2}{C_2R_2s+1}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s+\frac{1}{C_5s}\right)}{L_5s+R_5+\frac{1}{C_5s}}, \ \frac{R_L\left(L_Ls+\frac{1}{C_Ls}\right)}{L_Ls+R_L+\frac{1}{C_Ls}}\right)$$

**10.266** INVALID-ORDER-266 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1 \right)}{C_2 R_2 R_5 g_m s + 2 C_2 R_2 R_L g_m s + C_2 R_2 s + C_2 R_5 s + 4 C_2 R_L s + R_5 g_m + 2 R_L g_m + 1}$$

**10.267** INVALID-ORDER-267 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1\right)}{2C_2 C_L L_L R_2 g_m s^3 + 4C_2 C_L L_L s^3 + C_2 C_L R_2 g_m s^2 + C_2 C_L R_2 s^2 + C_2 C_L R_5 s^2 + 2C_2 R_2 g_m s + 4C_2 s + 2C_L L_L g_m s^2 + C_L R_5 g_m s + C_L s + 2g_m r^2 + C_L R_5 g_m s^2 + C_L R_$$

10.268 INVALID-ORDER-268 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_L R_2 g_m s^3 + C_2 C_L L_L R_2 s^3 + C_2 C_L L_L R_5 s^3 + 2 C_2 L_L R_2 g_m s^2 + 4 C_2 L_L s^2 + C_2 R_2 R_5 g_m s + C_2 R_2 s + C_2 R_5 s + C_L L_L R_5 g_m s^2 + C_L L_L s^2 + 2 L_L g_m s + R_5 g_m + 1}$$

**10.269** INVALID-ORDER-269 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}R_{2}R_{5}g_{m}s - C_{2}R_{2}s + C_{2}R_{5}s + R_{5}g_{m} - 1\right)}{2C_{2}C_{L}L_{L}R_{2}g_{m}s^{3} + 4C_{2}C_{L}L_{L}s^{3} + C_{2}C_{L}R_{2}g_{m}s^{2} + 2C_{2}C_{L}R_{2}g_{m}s^{2} + C_{2}C_{L}R_{2}s^{2} + C_{2}C_{L}R_{5}s^{2} + 4C_{2}C_{L}R_{L}s^{2} + 2C_{2}R_{2}g_{m}s + 4C_{2}s + 2C_{L}L_{L}g_{m}s^{2} + C_{L}R_{5}g_{m}s + 2C_{L}R_{5}g_{m}s + 2C_{L}R_$$

10.270 INVALID-ORDER-270 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_L R_2 R_5 R_L g_m s^3 + C_2 C_L L_L R_5 R_L s^3 + C_2 L_L R_2 R_5 g_m s^2 + 2 C_2 L_L R_2 R_L g_m s^2 + C_2 L_L R_5 s^2 + 4 C_2 L_L R_5 s^2 + 4 C_2 L_L R_5 s^2 + C_2 R_5 R_L g_m s + C_2 R_2 R_5 R_L g_m s^2 + C_2 R_5$$

10.271 INVALID-ORDER-271 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_L R_2 R_5 g_m s^3 + 2 C_2 C_L L_L R_2 s^3 + C_2 C_L L_L R_5 s^3 + 4 C_2 C_L L_L R_5 s^3 + 4 C_2 L_L R_2 g_m s^2 + 4 C_2 L_L s^2 + C_2 R_2 R_5 g_m s + 2 C_2 R_2 R_L g_m s + C_2 R_2 s + C_2 R_2 R_5 g_m s + C_2 R_$$

10.272 INVALID-ORDER-272 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{R_L\left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

**10.273** INVALID-ORDER-273 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5R_2s^2 + C_2R_2g_ms + C_2s - C_5s + g_m}{s\left(C_2C_5C_LR_2s^2 + 2C_2C_5R_2g_ms + 4C_2C_5s + C_2C_LR_2g_ms + C_2C_Ls + C_5C_Ls + 2C_5g_m + C_Lg_m\right)}$$

10.274 INVALID-ORDER-274 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s - C_5 s + g_m \right)}{C_2 C_5 C_L R_2 R_L s^3 + 2 C_2 C_5 R_2 R_L g_m s^2 + C_2 C_5 R_L s^2 + 4 C_2 C_5 R_L s^2 + C_2 C_L R_L g_m s^2 + C_2 C_L R_L s^2 + C_2 C_L R_L s^2 + C_2 C_L R_L s^2 + 2 C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m r^2 + C_2 C_L R_L r^2 + C_2 C_L r^2 + C_2 C_L r^2 + C_2 C_L r^2 + C_2 C_L r^2 + C$$

10.275 INVALID-ORDER-275 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(-C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s - C_5 s + g_m\right)}{s \left(2 C_2 C_5 C_L R_2 g_m s^2 + C_2 C_5 C_L R_2 s^2 + 4 C_2 C_5 C_L R_L s^2 + 2 C_2 C_5 R_2 g_m s + 4 C_2 C_5 s + C_2 C_L R_2 g_m s + C_2 C_L s + 2 C_5 C_L R_L g_m s + C_5 C_L s + 2 C_5 g_m + C_L g_m\right)}$$

10.276 INVALID-ORDER-276 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(-C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s - C_5 s + g_m\right)}{s \left(2C_2 C_5 C_L L_L R_2 g_m s^3 + 4C_2 C_5 C_L L_L s^3 + C_2 C_5 C_L R_2 s^2 + 2C_2 C_5 R_2 g_m s + 4C_2 C_5 s + C_2 C_L R_2 g_m s + C_2 C_L S + 2C_5 C_L L_L g_m s^2 + C_5 C_L s + 2C_5 g_m + C_L g_m\right)}$$

10.277 INVALID-ORDER-277 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s - C_5 s + g_m\right)}{C_2 C_5 C_L L_L R_2 s^4 + 2 C_2 C_5 L_L R_2 g_m s^3 + 4 C_2 C_5 L_L s^3 + C_2 C_5 L_L R_2 g_m s^3 + C_2 C_L L_L R_2 g_m s^3 + C_2 C_L L_L s^3 + C_2 R_2 g_m s + C_2 s + C_5 C_L L_L s^3 + 2 C_5 L_L g_m s^2 + C_5 s + C_L L_L g_m s^2 + g_m s^2 + C_5 S_1 R_2 g_m s^2 + C_5 S_2 R_2 g_m s^2 + C_5 R$$

10.278 INVALID-ORDER-278 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

10.279 INVALID-ORDER-279 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(-C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s - C_5 s + g_m\right)}{C_2 C_5 C_L L_L R_2 R_L s^4 + 2 C_2 C_5 L_L R_2 R_L g_m s^3 + C_2 C_5 L_L R_2 s^3 + 4 C_2 C_5 L_L R_2 s^3 + 4 C_2 C_5 L_L R_2 s^3 + C_2 C_5 L_L R_2 s^3 + C_2 C_L L_L R_2 s^3 + C_2 C_L$$

10.280 INVALID-ORDER-280 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

10.281 INVALID-ORDER-281 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( -C_2 C_5 R_2 s^2 + C_2 R_2 g_m s^2 + C_2 C_5 C_L L_L R_2 s^4 + 4 C_2 C_5 C_L L_L R_2 s^4 + 4 C_2 C_5 C_L L_L R_2 s^3 + 2 C_2 C_5 R_2 R_L g_m s^2 + C_2 C_5 R_2 s^2 + 4 C_2 C_5 R_L s^2 + C_2 C_L L_L R_2 g_m s^3 + C_2 C_L L_L s^3 + C_2 C_L L_L s^3 + C_2 C_L L_L R_2 g_m s^3 + C_2 C_L R_2 g_m s^3 +$$

10.282 INVALID-ORDER-282 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5R_2R_5s^2 + C_2R_2R_5g_ms - C_2R_2s + C_2R_5s - C_5R_5s + R_5g_m - 1}{C_2C_5C_LR_2R_5s^3 + 2C_2C_5R_2R_5g_ms^2 + 4C_2C_5R_5s^2 + C_2C_LR_2s^2 + C_2C_LR_2s^2 + C_2C_LR_2s^2 + 2C_2R_2g_ms + 4C_2s + C_5C_LR_5s^2 + 2C_5R_5g_ms + C_LR_5g_ms + C_Ls + 2g_ms^2 + C_2C_LR_2s^2 + C_2$$

10.283 INVALID-ORDER-283 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

10.284 INVALID-ORDER-284 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 R_2 R_5 s^2 - C_2 R_2 R_5 g_m s + C_2 R_2 s - C_2 R_5 s + C_5 R_5 s^2 - C_2 R_2 R_5 g_m s^2 + C_2 C_L R_2 R_$$

10.285 INVALID-ORDER-285 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 R_2 R_5 s^2 - C_2 R_2 R_5 g_m s + C_2 R_2 s - C_2 R_5 s + C_2 R_5 s + C_2 R_5 g_m s + C_2 R_5 s + C_2 R_5 g_m s^2 + C_2 C_5 R_2 R_5 g_m s^2 + C_2 C_5 R_5 g_m s^2 + C_2 C_5 R_5 g_m s^2 + C_2 C_5 R_5 g_m s^2 + C_5 C_5$$

10.286 INVALID-ORDER-286 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_2 C_5 R_2 R_5 s^2 + C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s - C_5 R_5 s + C_2 C_5 L_L R_2 R_5 g_m s^3 + 4 C_2 C_5 L_L R_2 s^3 + C_2 C_5 L_L R_2 R_5 g_m s^3 + 4 C_2 C_5 L_L R_2 s^3 + C_2 C_L L_L R_2 s^3 + C_2 C_L L_L R_2 s^3 + 2 C_2 L_L R_2 g_m s^2 + 4 C_2 L_L s^2 + C_2 R_2 R_5 g_m s^3 + C_2 C_L L_L R_2 s^$$

10.287 INVALID-ORDER-287 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L L_L s^2 + C_L C_2 C_5 C_L L_L R_2 R_5 g_m s^4 + 4 C_2 C_5 C_L L_L R_5 s^4 + 2 C_2 C_5 C_L R_2 R_5 R_L g_m s^3 + C_2 C_5 C_L R_2 R_5 s^3 + 4 C_2 C_5 C_L R_5 R_L s^3 + 2 C_2 C_5 R_2 R_5 g_m s^2 + 4 C_2 C_5 R_5 s^2 + 2 C_2 C_L L_L R_2 g_m s^3 + 4 C_2 C_5 R_2 R_5 g_m s^2 + 4 C_2 C_5 R_2 R_5 g_m s^2 + 4 C_2 C_5 R_2 R_5 g_m s^3 + 4 C_2 C_5 R_2 R_5 g_m s^2 + 4 C_2 C_5 R_2 R_5 g_m s^3 + 4 C_2 C_5 R_5 R_5 g_m$$

10.288 INVALID-ORDER-288 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_LR_2R_5R_Ls^4 + 2C_2C_5L_LR_2R_5R_Lg_ms^3 + C_2C_5L_LR_2R_5s^3 + 4C_2C_5L_LR_5R_Ls^3 + C_2C_5R_2R_5R_Ls^2 + C_2C_LL_LR_2R_5R_Lg_ms^3 + C_2C_LL_LR_2R_Ls^3 + C_2C_LL_LR_5R_Ls^3 + C_2C_LL_LR_2R_5R_Ls^3 + C_2C_LL_LR_2R_Ls^3 + C_2C_LL_LR_2R_Ls^2 + C_2C_LL_LR_2R_Ls^2 + C_2C_LL_LR_2R_Ls^2 + C_2C_LL_LR_2R_Ls^2 + C_2C_LL_LR_2R_Ls^2 +$$

10.289 INVALID-ORDER-289 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_LR_2R_5R_Lg_ms^4 + C_2C_5C_LL_LR_2R_5s^4 + 4C_2C_5C_LL_LR_5R_Ls^4 + 2C_2C_5L_LR_2R_5g_ms^3 + 4C_2C_5L_LR_5s^3 + 2C_2C_5R_2R_5R_Lg_ms^2 + C_2C_5R_2R_5s^2 + 4C_2C_5R_LR_2s^2 + 4C_2C_5R_2R_2s^2 + 4C_2C_5R_LR_2s^2 + 4C_2C_5R_2R_2s^2 + 4C_2C_5R_2s^2 + 4C_2C_5R_2s^2 + 4C_2C_5R_2R_2s^2 + 4C_2C_5R$$

10.290 INVALID-ORDER-290 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_LR_2R_5R_Lg_ms^4 + C_2C_5C_LL_LR_2R_5s^4 + 4C_2C_5C_LL_LR_5R_Ls^4 + C_2C_5C_LR_2R_5R_Ls^3 + 2C_2C_5R_2R_5R_Lg_ms^2 + C_2C_5R_2R_5s^2 + 4C_2C_5R_5R_Ls^2 + C_2C_LL_LR_2R_5g_s^2 + C_2C_5R_2R_5R_Lg_ms^2 + C_2C_5R_2R_5R_2R_5R_Lg_ms^2 + C_2C_5R_2R_5$$

**10.291** INVALID-ORDER-291 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5R_2R_5g_ms^2 - C_2C_5R_2s^2 + C_2C_5R_5s^2 + C_2R_2g_ms + C_2s + C_5R_5g_ms - C_5s + g_m}{s\left(C_2C_5C_LR_2R_5g_ms^2 + C_2C_5C_LR_2s^2 + C_2C_5C_LR_5s^2 + 2C_2C_5R_2g_ms + 4C_2C_5s + C_2C_LR_2g_ms + C_2C_Ls + C_5C_LR_5g_ms + C_5C_Ls + 2C_5g_m + C_Lg_m\right)}$$

**10.292** INVALID-ORDER-292 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 R_2 g_m s + C_2 s + C_5 R_5 g_m s^2 + C_2 C_5 R_2 R_5 g_m s^2 + C_2 C_5 R_2 R_5 g_m s^2 + C_2 C_5 R_2 R_2 g_m s^2 + C_2 C_5 R_2 R_2 g_m s^2 + C_2 C_5 R_2 g_s^2 + C_2 C_5 R_2 g_m s^2 + C_$$

**10.293** INVALID-ORDER-293 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 R_2 g_m s + C_2 s + C_5 R_5 g_m s - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L R_2 R_5 g_m s^2 + 2 C_2 C_5 C_L R_2 s^2 + C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 C_L R_5 s^2 + 2 C_2 C_5 R_2 g_m s + 4 C_2 C_5 s + C_2 C_L R_2 g_m s + C_2 C_L s + C_5 C_L R_5 g_m s + 2 C_5 C_L R_5 g_m s + C_5$$

10.294 INVALID-ORDER-294 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 R_2 g_m s + C_2 s + C_5 R_5 g_m s - C_5 s + g_m\right)}{s \left(2 C_2 C_5 C_L L_L R_2 g_m s^3 + 4 C_2 C_5 C_L L_L s^3 + C_2 C_5 C_L R_2 s^2 + C_2 C_5 C_L R_5 s^2 + 2 C_2 C_5 R_2 g_m s + 4 C_2 C_5 s + C_2 C_L R_2 g_m s + C_2 C_L L_L g_m s^2 + C_5 C_L L_L g_m s^2 + C_5 C_L R_2 g_m s + C_5 C_L R_2$$

10.295 INVALID-ORDER-295 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 R_2 g_m s + C_2 s + C_5 R_5 g_m s^2 - C_2 C_5 R_2 g_m s^2 + C_2 C_5 R_2 g_m s^2 + C_2 C_5 R_2 g_m s^2 + C_2 C_5 R_2 g_m s^3 + C_2 C_5 L_L R_2 g_m s^3 + C_2 C_5 R_2 g_m s^2 + C_2 C_5 R_2 g_m s^2 + C_2 C_5 R_2 g_m s^3 + C_2 C_5 L_L R_2 g_m s^3 + C_2 C_5 R_2 g_m s^2 + C_2 C_5 R_2 g_m s^2 + C_2 C_5 R_2 g_m s^3 +$$

**10.296** INVALID-ORDER-296 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

10.297 INVALID-ORDER-297 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_LR_2R_5R_Lg_ms^4 + C_2C_5C_LL_LR_2R_Ls^4 + C_2C_5C_LL_Rs_RL_s^4 + C_2C_5L_LR_2R_5g_ms^3 + 2C_2C_5L_LR_2R_Lg_ms^3 + C_2C_5L_LR_2s^3 + C_2C_5L_LR_2s^3 + 4C_2C_5L_LR_2s^3 + 4C_2C_5L$$

10.298 INVALID-ORDER-298 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}R_{L}s^{2} + L_{L}s + R_{L}\right)\left(C_{2}R_{L}R_{L}s^{2} + L_{L}s^{2} + L_{L}s^{2} + L_{L}s^{2}\right)\right)$$

10.299 INVALID-ORDER-299 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_LR_2R_5g_ms^4 + 2C_2C_5C_LL_LR_2R_Lg_ms^4 + C_2C_5C_LL_LR_2s^4 + C_2C_5C_LL_LR_5s^4 + 4C_2C_5C_LL_LR_2s^4 + C_2C_5C_LR_2R_5R_Lg_ms^3 + C_2C_5C_LR_2R_Ls^3 + C_2C_5C_LR_2R_2R_2R_Ls^3 + C_2C_5C_LR_2R_2R_2R_2R_2R_2R_2R_$$

**10.300** INVALID-ORDER-300 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 - C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m \right)}{C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 + 2 C_2 C_5 R_2 R_L g_m s^2 + C_2 C_5 R_2 s^2 + 4 C_2 C_5 R_L s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + g_m r^2 + 2 C_5 R_L r^2 + 2 C_5 R_$$

**10.301** INVALID-ORDER-301 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5R_2g_ms^3 + C_2C_5L_5s^3 - C_2C_5R_2s^2 + C_2R_2g_ms + C_2s + C_5L_5g_ms^2 - C_5s + g_m}{s\left(C_2C_5C_LL_5R_2g_ms^3 + C_2C_5C_LL_5s^3 + C_2C_5C_LR_2s^2 + 2C_2C_5R_2g_ms + 4C_2C_5s + C_2C_LR_2g_ms + C_2C_Ls + C_5C_LL_5g_ms^2 + C_5C_Ls + 2C_5g_m + C_Lg_m\right)}$$

**10.302** INVALID-ORDER-302 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 - C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 R_2 R_2 g_m s^2 + C_2 C_5 R_2 R_2 g_m s^2 + C_2 C_5 R_2 R_2 g_m s^3 + C_2 C_5 R_2 g_m s^3 + C_2 C_5 R_2 R_2 g_m s^3 + C_2 C_$$

**10.303** INVALID-ORDER-303 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 - C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_5 R_2 g_m s^3 + C_2 C_5 C_L L_5 s^3 + 2 C_2 C_5 C_L R_2 R_2 g_m s^2 + C_2 C_5 C_L R_2 s^2 + 4 C_2 C_5 C_L R_2 s^2 + 4 C_2 C_5 C_L R_2 s^2 + 2 C_2 C_5 R_2 g_m s + 4 C_2 C_5 s + C_2 C_L R_2 g_m s + C_2 C_L R_2 g_m s^2 + 2 C_5 C_L R_2 g_m s^2 + C_2 C_5 R_2 g_m s^2 + C_2 C_5 R_2 g_m s + C_2 C_5 R_2 g_m s + C_2 C_5 R_2 g_m s^2 + C_2 C_5 R_2$$

**10.304** INVALID-ORDER-304 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 - C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_5 R_2 g_m s^3 + C_2 C_5 C_L L_L R_2 g_m s^3 + 4 C_2 C_5 C_L L_L s^3 + C_2 C_5 C_L L_L s^3 + C_2 C_5 C_L L_2 s^2 + 2 C_2 C_5 R_2 g_m s + 4 C_2 C_5 s + C_2 C_L R_2 g_m s + C_2 C_$$

**10.305** INVALID-ORDER-305 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 - C_2 C_5 R_2 s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s^3 + C_2 C_5 L_L R_2 g_m s^3 +$$

**10.306** INVALID-ORDER-306 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}C_{5}L_{5}R_{2}g_{m}s^{3} + C_{2}C_{5}L_{5}s^{3} - C_{2}C_{5}R_{2}s^{2} + C_{2}R_{2}g_{m}s + C_{2}s + C_{5}L_{5}s^{2}\right)}{s\left(C_{2}C_{5}C_{L}L_{5}R_{2}g_{m}s^{3} + C_{2}C_{5}C_{L}L_{5}s^{3} + 2C_{2}C_{5}C_{L}L_{5}s^{3} + 2C_$$

10.307 INVALID-ORDER-307 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_Lg_ms^5 + C_2C_5C_LL_5L_LR_Ls^5 + C_2C_5C_LL_LR_2R_Ls^4 + C_2C_5L_5L_LR_2g_ms^4 + C_2C_5L_5L_Ls^4 + C_2C_5L_5R_2R_Lg_ms^3 + C_2C_5L_5R_Ls^3 + 2C_2C_5L_LR_2R_Lg_ms^3 + C_2C_5L_5R_Ls^4 + C_2C_5L_5L_LR_2R_Lg_ms^3 + C_2C_5L_5R_Ls^3 + 2C_2C_5L_LR_2R_Lg_ms^3 + C_2C_5L_5R_Ls^3 + 2C_2C_5L_LR_2R_Lg_ms^3 + C_2C_5L_5R_Lg_ms^3 + C_2C_5R_Lg_ms^3 + C_2C$$

**10.308** INVALID-ORDER-308 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_2 C_3 C_L L_L L_L R_2 R_L g_m s^5 + C_2 C_5 C_L L_L R_2 R_L g_m s^4 + C_2 C_5 C_L L_L R_2 s^4 + 4 C_2 C_5 C_L L_L R_L s^4 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 R_2 g_m s^3 + 4 C_2 C_5 L_L R_2 g_m s^3 + 4$$

10.309 INVALID-ORDER-309 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5R_2R_Lg_ms^4 + C_2C_5C_LL_5R_Ls^4 + 2C_2C_5C_LL_LR_2R_Lg_ms^4 + C_2C_5C_LL_LR_2s^4 + 4C_2C_5C_LL_LR_2s^4 + 4C_2C_5C_LL_LR_2s$$

**10.310** INVALID-ORDER-310 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_5 R_2 s^3 + C_2 L_5 R_2 g_m s^2 + C_2 L_5 s^2 - C_2 R_2 s - C_5 L_5 s^2 + L_5 g_m s - 1 \right)}{2 C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 R_2 s^3 + 4 C_2 C_5 L_5 R_L s^3 + C_2 L_5 R_2 g_m s^2 + C_2 L_5 s^2 + 2 C_2 R_2 R_L g_m s + C_2 R_2 s + 4 C_2 R_L s + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2 R_L g_m + 1}$$

10.311 INVALID-ORDER-311 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_5R_2s^3 + C_2L_5R_2g_ms^2 + C_2L_5s^2 - C_2R_2s - C_5L_5s^2 + L_5g_ms - 1}{C_2C_5C_LL_5R_2s^4 + 2C_2C_5L_5R_2g_ms^3 + 4C_2C_5L_5s^3 + C_2C_LL_5R_2g_ms^3 + C_2C_LL_5s^3 + C_2C_LR_2s^2 + 2C_2R_2g_ms + 4C_2s + C_5C_LL_5s^3 + 2C_5L_5g_ms^2 + C_LL_5g_ms^2 + C_Ls + 2g_ms^2 + C_Ls + 2g_ms^2 + 2G_Ls^2S_2s^2 + 2G_LS_2s^2 + 2G_LS_2$$

**10.312** INVALID-ORDER-312 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_5 R_2 s^3 + C_2 L_5 R_2 g_m s^2 + C_2 L_5 s^2 - C_2 R_2 s - C_5 L_5 s^2 - C_2 R_2 s - C_5 L_5 s^2 - C_2 R_2 s - C_5 L_5 R_2 R_2 g_m s^3 + C_2 C_5 L_5 R_2 g$$

**10.313** INVALID-ORDER-313 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_{L}R_{L}s+1\right)\left(C_{2}C_{5}L_{5}R_{2}s^{3}-C_{2}L_{5}R_{2}g_{m}s^{2}-C_{2}L_{5}s^{2}+C_{2}R_{2}s+C_{5}R_{2}g_{m}s^{2}-C_{2}L_{5}s^{2}+C_{2}R_{2}s+C_{5}R_{2}g_{m}s^{3}+C_{2}C_{L}L_{5}R_{2}g_{m}s^{3}+C_{2}C_{L}L_{5}R_{2}g_{m}s^{3}+C_{2}C_{L}L_{5}s^{$$

**10.314** INVALID-ORDER-314 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}C_{5}L_{5}R_{2}s^{3}-C_{2}L_{5}R_{2}g_{m}s^{2}-C_{2}L_{5}s^{2}+C_{2}R_{2}s$$

**10.315** INVALID-ORDER-315 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_2 C_5 L_5 R_2 s^3 + C_2 L_5 R_2 g_m s^2 + C_2 L_5 s^2 - C_2 R_2 s - C_5 L_5 R_2 s^3 + C_2 L_5 L_4 R_2 g_m s^4 + C_2 C_4 L_5 L_4 R_2 g_m s^4 + C_4 L_5 R_2 g_m s^2 + C_4 L_5 R_2 g_m s^2 + C_4 L_5 R_2 g_m s^4 + C_5 L_5 R_2 g_m s^4$$

**10.316** INVALID-ORDER-316 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

10.317 INVALID-ORDER-317 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_Ls^5 + 2C_2C_5L_5L_LR_2R_Lg_ms^4 + C_2C_5L_5L_LR_2s^4 + 4C_2C_5L_5L_LR_2s^4 + 4C_2C_5L_5L_LR_2s^4 + C_2C_5L_5L_LR_2s^3 + C_2C_LL_5L_LR_2R_Lg_ms^4 + C_2C_LL_5L_LR_2s^4 + C_2C_LL_5L_2s^4 + C_2C_LL_5L_2s^4$$

**10.318** INVALID-ORDER-318 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_5L_LR_2R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + 4C_2C_5C_LL_5L_LR_Ls^5 + 2C_2C_5L_5L_LR_2g_ms^4 + 4C_2C_5L_5L_Ls^4 + 2C_2C_5L_5R_2R_Lg_ms^3 + C_2C_5L_5R_2s^3 + 4C_2C_5L_5R_Ls^3 + 4C_2C_5R_Ls^3 + 4C_2$$

10.319 INVALID-ORDER-319 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_5L_LR_2R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + 4C_2C_5C_LL_5L_LR_Ls^5 + C_2C_5C_LL_5R_2R_Ls^4 + 2C_2C_5L_5R_2R_Lg_ms^3 + C_2C_5L_5R_2s^3 + 4C_2C_5L_5R_Ls^3 + C_2C_LL_5L_LR_2g_ms^3 + C_2C_5L_5R_2R_Lg_ms^3 + C_2C_5L_5R_2s^3 + 4C_2C_5L_5R_Ls^3 + C_2C_5L_5L_LR_2g_ms^3 + C_2C_5L_5R_2g_ms^3 + C_2C_5R_2g_ms^3 + C$$

**10.320** INVALID-ORDER-320 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 + C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 + C_2 C_5 R_2 R_5 g_m s^2 + 2 C_2 C_5 R_2 R_2 g_m s^2 + C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_4 s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s + 2 C_5 R_4 g_m s + C_5 R_5 g_m s + C_5$$

**10.321** INVALID-ORDER-321 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

10.322 INVALID-ORDER-322 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

**10.323** INVALID-ORDER-323 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 + C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 R_2 g_m s + C_2 s + C_5 C_5 R_2 R_2 g_m s^3 + C_2 C_5 C_L R_2 R_2 g_m s^3 + C_2 C_5 C_L R_2 R_2 g_m s^2 + C_2 C_5 C_L R_2 R_2 g_m s^2 + C_2 C_5 C_L R_2 s^2 + C_2 C_5 C$$

10.324 INVALID-ORDER-324 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 + C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 R_2 g_m s + C_2 s + C_2 R_2 g_m s^2 + C_2 C_5 C_L L_5 R_2 g_m s^3 + C_2 C_5 C_L L_2 R_2 g_m s^3 + C_2 C_5 C_L R_2 R_2 g_m s^3 + C_2 C$$

10.325 INVALID-ORDER-325 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 + C_2 C_5 R_2 R_2 R_3 r_3 + C_2 C_5 L_5 L_5 r_5 + C_2 C_5 L_5 r_5 + C_2 C_5 L_5 r_5 + C_2 C_5 L_5 L_5 r_5 + C_2 C_5 L_5 L_5 r_5 + C_2 C_5 L_5 r_5 + C_2 C_5 L_5 L_5 r_5 + C_2 C_5 L_5$$

**10.326** INVALID-ORDER-326 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}C_{5}L_{5}R_{2}g_{m}s^{3} + C_{2}C_{5}L_{5}s^{3} + C_{2}C_{5}R_{2}R_{5}g_{m}s^{2} - C_{2}C_{5}R_{2}s^{2} + C_{2}C_{5}C_{L}L_{5}s^{3} + C_{2}C_{$$

10.327 INVALID-ORDER-327 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

10.328 INVALID-ORDER-328 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_LR_2R_5g_ms^4 + 2C_2C_5C_LL_LR_2R_Lg_ms^4 + C_2C_5C_LL_LR_2s^4 + C_2C_5C_LL_LR_5s^4 + 4C_2C_5C_LL_LR_2s^4 + C_2C_5C_LL_LR_2s^4 + C_2C_5C_LL_LR_2s^$$

10.329 INVALID-ORDER-329 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5R_2R_Lg_ms^4 + C_2C_5C_LL_5R_Ls^4 + C_2C_5C_LL_LR_2R_5g_ms^4 + 2C_2C_5C_LL_LR_2R_Lg_ms^4 + C_2C_5C_LL_LR_2R_Lg_ms^4 + C_2C_5C_LL_LR_2R_L$$

10.330 INVALID-ORDER-330 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_5 R_2 R_5 s^3 + C_2 L_5 R_2 S_5 g_m s^2 - C_2 L_5 R_2 s^2 + C_2 L_5 R_5 s^2 - C_2 R_2 R_5 s - C_5 L_5 R_5 s^2 + C_2 L_5 R_5 g_m s^2 + C_2 L_5 R_2 R_5 g_m s^2 + C_2 L_5 R_5 g_m$$

10.331 INVALID-ORDER-331 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_5R_2R_5s^3 + C_2L_5R_2S_5g_ms^2 - C_2L_5R_2s^2 + C_2L_5R_5s^2 - C_2R_2R_5s - C_5L_5R_5s^2 + C_2C_5L_5R_2S_5g_ms^3 + C_2C_5L_5R_2S_5g_ms^3 + C_2C_5L_5S_5g_ms^3 + C_2C_5L_5S_5g_ms^2 + C_2C_5L_5S_5g_ms^2 + C_2C_5L_5S_5g_ms^2 + C_2C_5L_5S_5g_ms^2 + C_2C_5L_5S_5g_ms^$$

10.332 INVALID-ORDER-332 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( -C_1 + C_2 + C_3 + C_2 + C_3 + C_3 + C_4 + C_4 + C_5 + C_5 +$$

10.333 INVALID-ORDER-333 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_5R_2R_5R_Lg_ms^4 + C_2C_5C_LL_5R_2R_5s^4 + 4C_2C_5C_LL_5R_5R_Ls^4 + 2C_2C_5L_5R_2g_ms^3 + 4C_2C_5L_5R_5s^3 + C_2C_LL_5R_2g_ms^3 + 2C_2C_LL_5R_2g_ms^3 + C_2C_LL_5R_2g_ms^3 + C_2C_LL_5R_2g_ms^2 + C_2C_LL_5R_2g_ms^2 + C_2C_LL_5R_2g_ms^2 + C_2C_LL_5R_2g_ms^2 + C_2C_LL_5R_2g_ms^2$$

10.334 INVALID-ORDER-334 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_5L_LR_2R_5g_ms^5 + 4C_2C_5C_LL_5L_LR_5s^5 + C_2C_5C_LL_5R_2R_5s^4 + 2C_2C_5L_5R_2R_5g_ms^3 + 4C_2C_5L_5R_5s^3 + 2C_2C_LL_5L_LR_2g_ms^4 + 4C_2C_LL_5L_Ls^4 + C_2C_LL_5R_2R_5g_ms^3 + 4C_2C_5L_5R_5s^3 + 2C_2C_LL_5L_LR_2g_ms^4 + 4C_2C_LL_5L_Ls^4 + C_2C_LL_5R_2g_ms^3 + 4C_2C_5L_5R_5s^3 + 2C_2C_LL_5L_LR_2g_ms^4 + 4C_2C_LL_5L_Ls^4 + C_2C_LL_5R_2g_ms^4 + 4C_2C_LL_5L_Ls^4 + C_2C_LL_5R_2g_ms^4 + 4C_2C_LL_5R_2g_ms^4 + 4C_2C_LL_5R_2g_ms^2 + 4C_$$

10.335 INVALID-ORDER-335 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-\frac{L_L s}{C_2 C_5 C_L L_5 L_L R_2 R_5 s^5 + 2 C_2 C_5 L_5 L_L R_2 R_5 g_m s^4 + 4 C_2 C_5 L_5 L_L R_5 s^4 + C_2 C_5 L_5 R_2 R_5 s^3 + C_2 C_L L_5 L_L R_2 R_5 g_m s^4 + C_2 C_L L_5 L_L R_2 s^4 + C_2 C_L L_5 L_L R_5 s^4 + C_2 C_L L_5 L$$

10.336 INVALID-ORDER-336 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_5L_LR_2R_5g_ms^5 + 4C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5C_LL_5R_2R_5R_Lg_ms^4 + C_2C_5C_LL_5R_2R_5s^4 + 4C_2C_5C_LL_5R_5R_Ls^4 + 2C_2C_5L_5R_2R_5g_ms^3 + 4C_2C_5L_5R_5s^3 + 2C_2C_5C_LL_5R_5s^3 + 2C_2C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_$$

10.337 INVALID-ORDER-337 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5R_Ls^5 + 2C_2C_5L_5L_LR_2R_5R_Lg_ms^4 + C_2C_5L_5L_LR_2R_5s^4 + 4C_2C_5L_5L_LR_5R_Ls^4 + C_2C_5L_5R_2R_5R_Ls^3 + C_2C_LL_5L_LR_2R_5R_Lg_ms^4 + C_2C_LL_5L_LR_2R_5R_Ls^4 + C_2C_5L_5L_LR_2R_5R_Ls^4 + C_2C_$$

10.338 INVALID-ORDER-338 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_5L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2R_5s^5 + 4C_2C_5C_LL_5L_LR_5R_Ls^5 + 2C_2C_5L_5L_LR_2R_5g_ms^4 + 4C_2C_5L_5L_LR_5s^4 + 2C_2C_5L_5R_2R_5R_Lg_ms^3 + C_2C_5L_5R_2R_5s^3 + 2C_2C_5L_5L_LR_2R_5g_ms^4 + 4C_2C_5L_5L_LR_5s^4 + 2C_2C_5L_5R_2R_5R_Lg_ms^3 + C_2C_5L_5R_2R_5s^3 + 2C_2C_5L_5L_Rs^3 + 2C_2C_5L_Rs^3 + 2C_2$$

10.339 INVALID-ORDER-339 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_5L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2R_5s^5 + 4C_2C_5C_LL_5L_LR_5R_Ls^5 + C_2C_5C_LL_5R_2R_5R_Ls^4 + 2C_2C_5L_5R_2R_5R_Lg_ms^3 + C_2C_5L_5R_2R_5s^3 + 4C_2C_5L_5R_2R_5R_Ls^3 + C_2C_5C_LL_5L_Rs^3 + C_2C_5C_LL_5L_$$

**10.340** INVALID-ORDER-340 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 R_5 g_m s^3 - C_2 C_5 L_5 R_2 s^3 + C_2 C_5 L_5 R_5 s^3 + C_2 L_5 R_2 g_m s^2 + C_2 L_5 s^2 + C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + C_5 L_5 R_5 R_5 R_5 R_5 R_5 R_2 R_5 g_m s^3 + 2 C_2 C_5 L_5 R_2 R_2 g_m s^3 + 2 C_2 C_5 L_5 R_2 s^3 + C_2 C_5 L_5 R_2 s^3 + 2 C_2 C_5 L_5 R_2 s^3$$

**10.341** INVALID-ORDER-341 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5R_2R_5g_ms^3 - C_2C_5L_5R_2s^3 + C_2C_5L_5R_2s^3 + C_2L_5R_2g_ms^2 + C_2L_5s^2 + C_2R_2R_5g_ms - C_2R_2s + C_2R_5s^3 + C_2C_5L_5R_2g_ms^3 + C_2C_5L_5R_2g_ms^2 + C_2C_5L_5R_2g_ms^2 + C_2C_5L_5R_2g_ms^2 + C_2C_5L_5R_2g_ms^2 + C_2C_5L_5R_2g_ms^$$

10.342 INVALID-ORDER-342 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_{I}}{C_{2}C_{5}C_{L}L_{5}R_{2}R_{5}R_{L}g_{m}s^{4} + C_{2}C_{5}C_{L}L_{5}R_{2}R_{L}s^{4} + C_{2}C_{5}C_{L}L_{5}R_{5}R_{L}s^{4} + C_{2}C_{5}L_{5}R_{2}R_{5}g_{m}s^{3} + 2C_{2}C_{5}L_{5}R_{2}R_{L}g_{m}s^{3} + C_{2}C_{5}L_{5}R_{2}s^{3} + C_{2}C_{5}L_{5}R_{5}s^{3} + 4C_{2}C_{5}L_{5}R_{L}s^{3} + C_{2}C_{5}L_{5}R_{L}s^{3} + C_{2}C_{5}L_{5}R_{L}s^{3} + C_{2}C_{5}L_{5}R_{L}s^{3} + C_{2}C_{5}L_{5}R_{2}s^{3} + C_{2}C$$

**10.343** INVALID-ORDER-343 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_5 R_2 R_5 g_m s^3 - C_2 C_5 L_5 R_2 s^3 + C_2 C_5 L_5 R_2 s^3 + C_2 C_5 L_5 R_2 s^3 + C_2 C_5 L_5 R_2 s^4 + C_2 C_5 C_L L_5 R_2 s^4 + C_2 C_5 C_L L_5 R_2 s^4 + C_2 C_5 C_L L_5 R_2 s^4 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_L L_5 R_2 g_m s^3 +$$

**10.344** INVALID-ORDER-344 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}C_{5}L_{5}R_{2}R_{5}g_{m}s^{3}-C_{2}C_{5}L_{5}R_{2}s^{3}+C_{2}C_{5}L_{5}R_{2}s^{3}+C_{2}C_{5}L_{5}R_{2}s^{3}+C_{2}C_{5}L_{5}R_{2}s^{4}+C_{2}C_{5}C_{L}L_{5}R_{5}s^{4}+2C_{2}C_{5}L_{5}R_{2}g_{m}s^{3}+4C_{2}C_{5}L_{5}S^{3}+C_{2}C_{L}L_{5}R_{2}g_{m}s^{3}+C_{2}C_{L}L_{5}S^{2}+C_{2}C_{L}L_{$$

**10.345** INVALID-ORDER-345 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

**10.346** INVALID-ORDER-346 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L C_2 C_3 C_L L_5 L_L R_2 g_m s^5 + 4 C_2 C_5 C_L L_5 L_L s^5 + C_2 C_5 C_L L_5 R_2 R_5 g_m s^4 + 2 C_2 C_5 C_L L_5 R_2 R_L g_m s^4 + C_2 C_5 C_L L_5 R_2 s^4 + C_2 C_5 C_L L_5 R_5 s^4 + 4 C_2 C_5 C_L L_5 R_L s^4 + 2 C_2 C_5 L_5 R_2 g_m s^5 + 4 C_2 C_5 C_L L_5 R_2 R_2 g_m s^5 + 4 C_2 C_5 C_L L_5 R_2 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5 R_5 g_m s^6 + 2 C_2 C_5 C_L L_5 R_5$$

10.347 INVALID-ORDER-347 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2R_Ls^5 + C_2C_5C_LL_5L_LR_5R_Ls^5 + C_2C_5L_5L_LR_2R_5g_ms^4 + 2C_2C_5L_5L_LR_2R_Lg_ms^4 + C_2C_5L_5L_LR_2s^4 + C_2C_5L_5L_LR_5s^4 + 4C_2C_5L_5L_LR_2s^4 + C_2C_5L_5L_LR_2s^4 + C_2C_5L_5L_2s^4 + C_2C_5L_5L_2s^4 + C_2C_5L_5L_2s^4 + C_2C_5L_5L_2s^4 + C_2C_5L_2s^$$

**10.348** INVALID-ORDER-348 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5g_ms^5 + 2C_2C_5C_LL_5L_LR_2R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_5s^5 + 4C_2C_5C_LL_5L_LR_2s^5 + 2C_2C_5L_5L_LR_2g_ms^4 + 4C_2C_5L_5L_Ls^4 + C_2C_5L_5L_LR_2s^5 + 4C_2C_5C_LL_5L_LR_2s^5 + 4C_2C_5C$$

10.349 INVALID-ORDER-349 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

10.350 INVALID-ORDER-350 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_5 R_2 R_5 g_m s^3 - C_2 C_5 L_5 R_2 s^3 + C_2 C_5 L_5 R_5 s^3 - C_2 C_5 R_2 R_5 s^2 + C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_2 R_5 g_m s^3 + C_2 C_5 L_5 R_2 R_5 g_m s^3 + C_2 C_5 L_5 R_2 s^3 + C_2 C_5 R_2 s^$$

10.351 INVALID-ORDER-351 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_5R_2R_5g_ms^3 - C_2C_5L_5R_2s^3 + C_2C_5L_5R_5s^3 - C_2C_5R_2R_5s^2 + C_2R_2R_5g_ms - C_2R_2R_5g_ms - C_2R_2R_5g_ms^3 - C_2C_5L_5R_2R_5g_ms^3 + C_2C_5L_5R_2R_5g_ms^3 + C_2C_5R_2R_5g_ms^3 + C_2C_5R_5R_5g_ms^3 + C_2C_5R_5R_$$

10.352 INVALID-ORDER-352 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5R_2R_5R_Lg_ms^4 + C_2C_5C_LL_5R_2R_Ls^4 + C_2C_5C_LL_5R_5R_Ls^4 + C_2C_5C_LR_2R_5R_Ls^3 + C_2C_5L_5R_2g_ms^3 + 2C_2C_5L_5R_2R_Lg_ms^3 + C_2C_5L_5R_2s^3 + C_2C_5L_5R_5s^3 + 4C_2C_5L_5R_2g_ms^3 + 2C_2C_5L_5R_2g_ms^3 + 2C_2C_5L_5R_2g_ms^3 + C_2C_5L_5R_2g_ms^3 + C_2C_5L_5R_2g_ms^2$$

10.353 INVALID-ORDER-353 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{(C_L)}{C_2C_5C_LL_5R_2R_5g_ms^4 + 2C_2C_5C_LL_5R_2R_Lg_ms^4 + C_2C_5C_LL_5R_2s^4 + C_2C_5C_LL_5R_5s^4 + 4C_2C_5C_LL_5R_Ls^4 + 2C_2C_5C_LR_2R_5R_Lg_ms^3 + C_2C_5C_LR_2R_5s^3 + 4C_2C_5C_LR_5R_Ls^4 + 4C_2C_5C_LL_5R_Ls^4 + 2C_2C_5C_LR_2R_5R_Lg_ms^3 + C_2C_5C_LR_2R_5s^3 + 4C_2C_5C_LR_5R_Ls^4 + 4C_2C_5C_LR_2R_5R_Lg_ms^3 + C_2C_5C_LR_2R_5s^3 + 4C_2C_5C_LR_2R_5R_Lg_ms^3 + C_2C_5C_LR_2R_5R_Lg_ms^3 + C_2C_5C_LR_2R_5R_Lg_ms^2 + C_2C_5C_LR_2R_5R_Lg_ms^2 + C_2C_5C_LR_2R_5R_Lg_m$$

10.354 INVALID-ORDER-354 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{\left(C_{LL} + C_{LL} +$ 

10.355 INVALID-ORDER-355 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5g_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_Rs^5 + C_2C_5C_LL_LR_2R_5s^4 + 2C_2C_5L_5L_LR_2g_ms^4 + 4C_2C_5L_5L_Ls^4 + C_2C_5L_5R_2R_5g_ms^3 + C_2C_5L_5R_2s^3 + C_2C_5C_LL_5R_2s^3 +$$

10.356 INVALID-ORDER-356 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_5L_LR_2g_ms^5 + 4C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5R_2R_5g_ms^4 + 2C_2C_5C_LL_5R_2R_Lg_ms^4 + C_2C_5C_LL_5R_2s^4 + C_2C_5C_LL_5R_5s^4 + 4C_2C_5C_LL_5R_Ls^4 + 2C_2C_5C_LL_5R_2R_Lg_ms^4 + C_2C_5C_LL_5R_2s^4 + C_2C_5C_LL_5R_2s^4 + 4C_2C_5C_LL_5R_2s^4 + 2C_2C_5C_LL_5R_2s^4 + 2C_2C_5C_LL$$

10.357 INVALID-ORDER-357 
$$Z(s) = \left(\infty, R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2R_Ls^5 + C_2C_5C_LL_5L_LR_5R_Ls^5 + C_2C_5C_LL_LR_2R_5R_Ls^4 + C_2C_5L_5L_LR_2R_5g_ms^4 + 2C_2C_5L_5L_LR_2R_Lg_ms^4 + C_2C_5L_5L_LR_2R_Lg_ms^4 + C_2C_5L_LR_2R_Lg_ms^4 + C_2C_5L_Lg_ms^4 + C_2C_5L_Lg_ms^4 + C_2C_5L_Lg_ms^4 + C_2C_5L_Lg_ms^4 + C_2$$

10.358 INVALID-ORDER-358 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_5L_LR_2R_5g_ms^5 + 2C_2C_5C_LL_5L_LR_2R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_5s^5 + 4C_2C_5C_LL_5L_LR_2s^5 + 2C_2C_5C_LL_5L_LR_2s^5 + 2C_2C_5C_LL_5L_2s^5 + 2C_2C_5C_LL_5L_2s^5 + 2C_2C_5C_LL_5L_2s^5 + 2C_2C_5C_LL_5L_2s^5 + 2C_2C_5C_LL_5L_2s^5 + 2C_2C_5C_LL_5L_2s^5 + 2C_2C_5C_LL_5L_2$$

10.359 INVALID-ORDER-359 
$$Z(s) = \left(\infty, \ R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

**10.360** INVALID-ORDER-360 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2L_2R_5g_ms^2 - C_2L_2s^2 + C_2R_5s + R_5g_m - 1}{C_2C_LL_2R_5g_ms^3 + C_2C_LL_2s^3 + C_2C_LR_5s^2 + 2C_2L_2g_ms^2 + 4C_2s + C_LR_5g_ms + C_Ls + 2g_m}$$

**10.361** INVALID-ORDER-361 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_5 s + R_5 g_m - 1 \right)}{C_2 C_L L_2 R_5 g_m s^3 + C_2 C_L L_2 R_L s^3 + C_2 C_L R_5 R_L s^2 + C_2 L_2 R_5 g_m s^2 + 2 C_2 L_2 R_L g_m s^2 + C_2 L_2 s^2 + C_2 R_5 s + 4 C_2 R_L s + C_L R_5 R_L g_m s + C_L R_L s + R_5 g_m + 2 R_L g_m + 1}$$

**10.362** INVALID-ORDER-362 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_2 R_5 g_m s^3 + 2 C_2 C_L L_2 R_L g_m s^3 + C_2 C_L L_2 s^3 + C_2 C_L R_5 s^2 + 4 C_2 C_L R_L s^2 + 2 C_2 L_2 g_m s^2 + 4 C_2 s + C_L R_5 g_m s + 2 C_L R_L g_m s + C_L s + 2 g_m r^2 + 2 C_2 R_L g_m s^2 + 2 C_2 R_L g_m s^2$$

**10.363** INVALID-ORDER-363 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ R_5, \ L_L s + \frac{1}{C_L s}\right)$$

**10.364** INVALID-ORDER-364 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_2 L_L R_5 g_m s^4 + C_2 C_L L_L R_5 s^3 + 2 C_2 L_2 L_L g_m s^3 + C_2 L_2 R_5 g_m s^2 + C_2 L_2 s^2 + 4 C_2 L_L s^2 + C_2 R_5 s + C_L L_L R_5 g_m s^2 + C_L L_L s^2 + 2 L_L g_m s + R_5 g_m + 1}$$

**10.365** INVALID-ORDER-365 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_5 s + R_5 g_m - 1\right)}{2C_2 C_L L_2 L_L g_m s^4 + C_2 C_L L_2 R_5 g_m s^3 + 2C_2 C_L L_2 R_L g_m s^3 + C_2 C_L L_2 s^3 + 4C_2 C_L L_L s^3 + C_2 C_L L_2 s^2 + 4C_2 C_L L_2 s^2 + 2C_2 L_2 g_m s^2 + 4C_2 s + 2C_L L_2 g_m s^2 + C_L R_5 g_m s + 2C_L L_2 g_m s^2 + C_L R_5 g_$$

**10.366** INVALID-ORDER-366 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_2 L_L R_5 R_L g_m s^4 + C_2 C_L L_L R_L s^4 + C_2 C_L L_L R_5 R_L s^3 + C_2 L_2 L_L R_5 g_m s^3 + 2 C_2 L_2 L_L R_5 g_m s^3 + C_2 L_2 L_L s^3 + C_2 L_2 R_5 g_m s^2 + C_2 L_2 R_L s^2 + C_2 L_L R_5 s^2 + 4 C_2 L_L R_5 g_m s^3 + C_2 L_2 R_5 g_m s^3 + C_2 R_5 g_$$

10.367 INVALID-ORDER-367 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}R_{L}s^{2} + L_{L}s + R_{L}\right)\left(C_{2}L_{2}R_{5}g_{m}s^{2} - C_{2}L_{2}s^{2} + C_{2}R_{5}s + R_{5}g_{m} - 1\right)}{C_{2}C_{L}L_{2}L_{L}R_{5}g_{m}s^{4} + 2C_{2}C_{L}L_{2}L_{L}S^{4} + C_{2}C_{L}L_{L}R_{5}s^{3} + 4C_{2}C_{L}L_{L}R_{5}s^{3} + 2C_{2}L_{2}L_{L}g_{m}s^{3} + C_{2}L_{2}R_{5}g_{m}s^{2} + 2C_{2}L_{2}R_{L}g_{m}s^{2} + C_{2}L_{2}s^{2} + 4C_{2}L_{L}s^{2} + C_{2}L_{2}s^{2} + C_{2}L_{2}S$$

10.368 INVALID-ORDER-368 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ R_5, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

**10.369** INVALID-ORDER-369 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 s^3 + C_2 L_2 g_m s^2 + C_2 s - C_5 s + g_m \right)}{2 C_2 C_5 L_2 R_L g_m s^3 + C_2 C_5 L_2 s^3 + 4 C_2 C_5 R_L s^2 + C_2 L_2 g_m s^2 + C_2 s + 2 C_5 R_L g_m s + C_5 s + g_m}$$

10.370 INVALID-ORDER-370 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2s^3 + C_2L_2g_ms^2 + C_2s - C_5s + g_m}{s\left(C_2C_5C_LL_2s^3 + 2C_2C_5L_2g_ms^2 + 4C_2C_5s + C_2C_LL_2g_ms^2 + C_2C_Ls + C_5C_Ls + 2C_5g_m + C_Lg_m\right)}$$

**10.371** INVALID-ORDER-371 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 s^3 + C_2 L_2 g_m s^2 + C_2 s - C_5 s + g_m \right)}{C_2 C_5 C_L L_2 R_L s^4 + 2 C_2 C_5 L_2 R_L g_m s^3 + C_2 C_5 L_2 s^3 + 4 C_2 C_5 R_L s^2 + C_2 C_L L_2 R_L g_m s^3 + C_2 C_L R_L s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 C_L R_L s^2 + 2 C_5 R_L g_m s + C_5 s + C_L R_L g_m s + g_m R_L \left( -C_2 C_5 L_2 R_L g_m s^3 + C_2 C_5 L_2 R_L g$$

10.372 INVALID-ORDER-372 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(-C_2 C_5 L_2 s^3 + C_2 L_2 g_m s^2 + C_2 s - C_5 s + g_m\right)}{s \left(2C_2 C_5 C_L L_2 R_L g_m s^3 + C_2 C_5 C_L L_2 s^3 + 4C_2 C_5 C_L R_L s^2 + 2C_2 C_5 L_2 g_m s^2 + 4C_2 C_5 s + C_2 C_L L_2 g_m s^2 + C_2 C_L s + 2C_5 C_L R_L g_m s + C_5 C_L s + 2C_5 g_m + C_L g_m\right)}$$

**10.373** INVALID-ORDER-373 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(-C_2 C_5 L_2 s^3 + C_2 L_2 g_m s^2 + C_2 s - C_5 s + g_m\right)}{s \left(2C_2 C_5 C_L L_2 L_2 g_m s^4 + C_2 C_5 C_L L_2 s^3 + 4C_2 C_5 C_L L_L s^3 + 2C_2 C_5 L_2 g_m s^2 + 4C_2 C_5 s + C_2 C_L L_2 g_m s^2 + C_2 C_L L_2 g_m s^2 + C_5 C_L L_L g_m s^2 + C_5 C_L L_2 g_m s^2 + C_5 C_L L_2$$

10.374 INVALID-ORDER-374 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_2 C_5 L_2 s^3 + C_2 L_2 g_m s^2 + C_2 s - C_5 s + g_m\right)}{C_2 C_5 C_L L_2 L_L s^5 + 2 C_2 C_5 L_2 L_L g_m s^4 + C_2 C_5 L_2 s^3 + 4 C_2 C_5 L_L s^3 + C_2 C_L L_L L_L g_m s^4 + C_2 C_L L_L s^3 + C_2 L_L g_m s^2 + C_2 s + C_5 C_L L_L s^3 + 2 C_5 L_L g_m s^2 + C_5 s + C_L L_L g_m s^2 + g_m s^2 + C_5 c_L L_L s^3 + C_5$$

10.375 INVALID-ORDER-375 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(-C_{2}C_{5}L_{2}s^{3} + C_{2}L_{2}g_{m}s^{2} + C_{2}s - C_{5}s + g_{m}\right)}{s\left(2C_{2}C_{5}C_{L}L_{2}L_{L}g_{m}s^{4} + 2C_{2}C_{5}C_{L}L_{2}g_{m}s^{3} + C_{2}C_{5}C_{L}L_{2}s^{3} + 4C_{2}C_{5}C_{L}L_{L}s^{3} + 4C_{2}C_{5}C_{L}L_{2}s^{2} + 2C_{2}C_{5}L_{2}g_{m}s^{2} + 4C_{2}C_{5}s + C_{2}C_{L}L_{2}g_{m}s^{2} + C_{2}C_{$$

10.376 INVALID-ORDER-376 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s \left(-C_2 C_5 L_2 s^3 + C_2 L_2 g_m s^2 + C_2 s - C_5 s + g_m\right)}{C_2 C_5 C_L L_2 L_L R_L s^5 + 2 C_2 C_5 L_2 L_L R_L g_m s^4 + C_2 C_5 L_2 L_L s^4 + C_2 C_5 L_2 R_L s^3 + 4 C_2 C_5 L_L R_L s^3 + C_2 C_L L_L R_L g_m s^4 + C_2 C_L L_L R_L g_m s^3 + C_2 L_2 R_L g_m s^2 + C_2 L_L R_L g_m s^4 + C_2 C_L L_L R_L g_m s^4 + C_2 C_L R_L g_m s$$

10.377 INVALID-ORDER-377 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

10.378 INVALID-ORDER-378 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{R_L \left( C_L L_L s^2 + 1 \right) \left( -C_2 C_5 L_2 s^3 + C_2 L_2 g_m s^2 + C_2 C_5 C_L L_2 L_L s^5 + C_2 C_5 C_L L_2 R_L s^4 + 4 C_2 C_5 C_L L_2 R_L s^4 + 2 C_2 C_5 L_2 R_L g_m s^3 + C_2 C_5 L_2 s^3 + 4 C_2 C_5 R_L s^2 + C_2 C_L L_2 L_L g_m s^4 + C_2 C_L L_2 R_L g_m s^3 + C_2 C_5 R_L s^2 + C_2 C_L L_2 R_L g_m s^4 + C_2 C_L L_2 R_L g_m s^3 + C_2 C_5 R_L s^2 + C_2 C_L L_2 R_L g_m s^4 + C_2 C_L L_2 R_L g_m s^4 + C_2 C_L R_L g_m s^4 + C_2$$

**10.379** INVALID-ORDER-379 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$$

**10.380** INVALID-ORDER-380 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2R_5s^3 + C_2L_2R_5g_ms^2 - C_2L_2s^2 + C_2R_5s - C_5R_5s + R_5g_m - 1}{C_2C_5C_LL_2R_5s^4 + 2C_2C_5L_2R_5g_ms^3 + 4C_2C_5R_5s^2 + C_2C_LL_2R_5g_ms^3 + C_2C_LL_2s^3 + C_2C_LR_5s^2 + 2C_2L_2g_ms^2 + 4C_2s + C_5C_LR_5s^2 + 2C_5R_5g_ms + C_LR_5g_ms + C_Ls + 2g_ms^2 + 2C_2L_2g_ms^2 + 2$$

10.381 INVALID-ORDER-381 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 R_5 s^3 + C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_5 s - C_5 R_5 s + C_2 C_2 L_2 R_5 R_L s^4 + 2 C_2 C_5 L_2 R_5 R_L g_m s^3 + C_2 C_5 L_2 R_5 R_L s^2 + C_2 C_4 L_2 R_5 R_L g_m s^3 + C_2 C_4 R_5 R_L g_m s^3 + C_5 R_5 R_L g$$

10.382 INVALID-ORDER-382 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_{L}R_{L}s+1\right)\left(C_{2}C_{5}L_{2}R_{5}s^{3}-C_{2}L_{2}R_{5}g_{m}s^{2}+C_{2}L_{2}s^{2}-C_{2}R_{5}s+C_{2}L_{2}S_{5}s^{2}+C_{2}L_{2}S_{5}g_{m}s^{3}+C_{2}L_{2}S_{5}g$$

10.383 INVALID-ORDER-383 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_2 R_5 s^3 - C_2 L_2 R_5 g_m s^2 + C_2 L_2 s^2 - C_2 R_5 s + C_2 L_2 R_5 g_m s^2 + C_2 L_2 R_5 g_m s^2 + C_2 L_2 R_5 g_m s^2 + C_2 L_2 R_5 g_m s^3 + C_2 C_L L_2 R_5 g_m s^3 + C_2 C_L$$

**10.384** INVALID-ORDER-384 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_2 C_5 L_2 R_5 s^3 + C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_5 s - C_5 R_5 s + C_2 C_5 L_2 L_2 R_5 g_m s^2 - C_2 L_2 R_5 g_m s^2 - C_2 L_2 R_5 g_m s^2 + C_2 R_5 g_m s^2$$

10.385 INVALID-ORDER-385 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{(C_L L_L s^2 + C_L)}{2C_2 C_5 C_L L_2 L_L R_5 g_m s^5 + 2C_2 C_5 C_L L_2 R_5 R_L g_m s^4 + C_2 C_5 C_L L_2 R_5 s^4 + 4C_2 C_5 C_L L_L R_5 s^4 + 4C_2 C_5 C_L R_5 R_L s^3 + 2C_2 C_5 L_2 R_5 g_m s^3 + 4C_2 C_5 R_5 s^2 + 2C_2 C_L L_2 L_L g_m s^4 + C_2 C_5 C_L L_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_5 g_m s^3 + 4C_2 C_5 R_5 g_m s^3 + 4C_2$$

10.386 INVALID-ORDER-386 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_5R_Ls^5 + 2C_2C_5L_2L_LR_5R_Lg_ms^4 + C_2C_5L_2L_LR_5s^4 + C_2C_5L_2R_5R_Ls^3 + 4C_2C_5L_LR_5R_Ls^3 + C_2C_LL_2L_LR_5R_Lg_ms^4 + C_2C_LL_2L_LR_5R_Ls^3 + C_2C_LL_2L_2L_2R_5R_Ls^3 + C_2C_LL_2L_2R_5R_Ls^3 + C_2C_LL_2R_5R_Ls^3 + C_2C_$$

10.387 INVALID-ORDER-387 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_LR_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_5s^5 + 4C_2C_5C_LL_LR_5R_Ls^4 + 2C_2C_5L_2L_Rsg_ms^4 + 2C_2C_5L_2R_5R_Lg_ms^3 + C_2C_5L_2R_5s^3 + 4C_2C_5L_LR_5s^3 + 4C_2C_5R_5R_Ls^2 - 4C_2C_5L_2L_Rsg_ms^4 + 2C_2C_5L_2L_Rsg_ms^4 + 2C_2C_5L_2R_5R_Lg_ms^3 + C_2C_5L_2R_5s^3 + 4C_2C_5L_LR_5s^3 + 4C_2C_5R_5R_Ls^2 - 4C_2C_5L_LR_5s^3 + 4C_2C_5L_L$$

10.388 INVALID-ORDER-388 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_LR_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_5s^5 + C_2C_5C_LL_2R_5R_Ls^4 + 4C_2C_5C_LL_LR_5R_Ls^4 + 2C_2C_5L_2R_5R_Lg_ms^3 + C_2C_5L_2R_5s^3 + 4C_2C_5R_5R_Ls^2 + C_2C_LL_2L_LR_5g_ms^3 + C_2C_5L_2R_5R_Lg_ms^3 + C_2C_5L_2R_5R_Ls^2 + C_2C_5L_2R_$$

**10.389** INVALID-ORDER-389 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 R_5 s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 L_2 R_5 g_m s^3 + 2 C_2 C_5 L_2 R_L g_m s^3 + C_2 C_5 L_2 s^3 + C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_L s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 R_5 g_m s + 2 C_5 R_L g_m s + C_5 s + g_m R_5 R_5 g_m s + C_5 R_5 g_m s$$

**10.390** INVALID-ORDER-390 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2R_5g_ms^3 - C_2C_5L_2s^3 + C_2C_5R_5s^2 + C_2L_2g_ms^2 + C_2s + C_5R_5g_ms - C_5s + g_m}{s\left(C_2C_5C_LL_2R_5g_ms^3 + C_2C_5C_LL_2s^3 + C_2C_5C_LR_5s^2 + 2C_2C_5L_2g_ms^2 + 4C_2C_5s + C_2C_LL_2g_ms^2 + C_2C_Ls + C_5C_LR_5g_ms + C_5C_Ls + 2C_5g_m + C_Lg_m\right)}$$

10.391 INVALID-ORDER-391 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 R_5 s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 R_5 g_m s^2 + C_2 S_2 R_5 g_m s^3 + C_2 C_5 L_2 R_5 g_m s^3 + C_$$

10.392 INVALID-ORDER-392 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 R_5 s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 R_5 g_m s - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_2 R_5 g_m s^3 + 2 C_2 C_5 C_L L_2 R_L g_m s^3 + C_2 C_5 C_L L_2 s^3 + C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 L_2 g_m s^2 + 4 C_2 C_5 s + C_2 C_L L_2 g_m s^2 + C_2 C_L L_2 g_m s^2 + C_2 C_L R_5 g_m s + 2 C_5 C_L$$

**10.393** INVALID-ORDER-393 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}C_{5}L_{2}R_{5}g_{m}s^{3}-C_{2}C_{5}L_{2}s^{3}+C_{2}C_{5}R_{5}s^{2}+C_{2}L_{2}g_{m}s^{2}+C_{2}s+C_{5}R_{5}g_{m}s-C_{5}s+g_{m}\right)}{s\left(2C_{2}C_{5}C_{L}L_{2}g_{m}s^{4}+C_{2}C_{5}C_{L}L_{2}S^{3}+4C_{2}C_{5}C_{L}L_{2}s^{3}+C_{2}C_{5}C_{L}L_{2}s^{3}+C_{2}C_{5}C_{L}L_{2}s^{3}+C_{2}C_{5}C_{L}L_{2}s^{2}+C_{2}C_{5}C_{L}L_{2}g_{m}s^{2}+C_{2}C_$$

**10.394** INVALID-ORDER-394 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 R_5 s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 R_5 g_m s^2 + C_2 S_2 R_5 g_m s^3 + C_2 C_5 L_2 L_2 R_5 g_m s^3 + C_2 C_5 R_5 s^2 + C_2 C_2 L_2 L_2 R_5 g_m s^4 + C_2 C_4 L_2 R_5 g_m s^3 + C_4 C_5 R_5 g_m s^3 + C_4 C_5 R_5 g_m s^3 + C_5 R$$

**10.395** INVALID-ORDER-395 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{S}^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}C_{5}L_{2}R_{5}g_{m}s^{3} - C_{2}C_{5}L_{2}s^{3} + C_{2}C_{5}R_{5}s^{2} + C_{2}L_{2}g_{m}s^{2} + C_{2}s + C_{5}R_{5}s^{2} + C_{2}L_{2}g_{m}s^{2} + C_{2}s + C_{5}R_{5}s^{2}}{s\left(2C_{2}C_{5}C_{L}L_{2}L_{2}g_{m}s^{4} + C_{2}C_{5}C_{L}L_{2}R_{5}g_{m}s^{3} + 2C_{2}C_{5}C_{L}L_{2}R_{5}g_{m}s^{3} + 2C_{2}C_{5}C_{L}L_{2}s^{3} + 4C_{2}C_{5}C_{L}L_{2}s^{3} + 4C_{2}C_{5}C_{L}R_{5}s^{2} + 4C_{2}C_{5}C_{L}R_{5}s^{2} + 2C_{2}C_{5}L_{2}g_{m}s^{2} + 4C_{2}C_{5}s + C_{2}C_{L}R_{5}s^{2} + C_{2}C_{5}C_{L}R_{5}s^{2} + C_{2}$$

10.396 INVALID-ORDER-396 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

10.397 INVALID-ORDER-397 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_2 C_3 C_L L_L L_L R_5 g_m s^5 + 2 C_2 C_5 C_L L_L L_L R_L g_m s^5 + C_2 C_5 C_L L_L L_L R_5 s^4 + 4 C_2 C_5 C_L L_L R_L s^4 + 2 C_2 C_5 L_L L_L g_m s^4 + C_2 C_5 L_2 R_5 g_m s^3 + 2 C_2 C_5 L_2 R_L g_m s^3 + C_2 C_5 R_5 g_m s^3 + C_3 C_5 R_5 g_m s^3 + C_4 C_5 R_5 g_m s^3 + C_5 R_5 g_m s$$

10.398 INVALID-ORDER-398 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_Ls^4 + C_2C_5C_LL_LR_5s^4 + 4C_2C_5C_LL_LR_Ls^4 + C_2C_5C_LL_2R_Ls^3 + C_2C_5C_LL_2R_Ls^4 + C_2C_5C_LL_2R_Ls^$$

**10.399** INVALID-ORDER-399 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 s^3 + C_2 L_2 g_m s^2 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m \right)}{C_2 C_5 L_2 L_5 g_m s^4 + 2 C_2 C_5 L_2 R_L g_m s^3 + C_2 C_5 L_2 s^3 + C_2 C_5 L_5 s^3 + 4 C_2 C_5 R_L s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 L_5 g_m s^2 + 2 C_5 R_L g_m s + C_5 s + g_m R_2 + C_5 R_L g_m s^2 + C_5 R_$$

**10.400** INVALID-ORDER-400 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5g_ms^4 - C_2C_5L_2s^3 + C_2C_5L_5s^3 + C_2L_2g_ms^2 + C_2s + C_5L_5g_ms^2 - C_5s + g_m}{s\left(C_2C_5C_LL_2L_5g_ms^4 + C_2C_5C_LL_2s^3 + C_2C_5C_LL_5s^3 + 2C_2C_5L_2g_ms^2 + 4C_2C_5s + C_2C_LL_2g_ms^2 + C_2C_Ls + C_5C_LL_5g_ms^2 + C_5C_Ls + 2C_5g_m + C_Lg_m\right)}$$

10.401 INVALID-ORDER-401 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 s^3 + C_2 L_2 g_m s^2 + C_2 s + C_5 L_5 g_m s^4 + C_2 C_5 L_2 L_5 R_L g_m s^4 + C_2 C_5 L_2 L_5 R_L g_m s^4 + C_2 C_5 L_2 L_5 R_L g_m s^3 + C_2 C_5 L_2 S^3 + C_2 C_5 L_2 S^3 + C_2 C_5 L_2 R_L g_m s^3 + C_$$

**10.402** INVALID-ORDER-402 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 s^3 + C_2 L_2 g_m s^2 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_2 L_5 g_m s^4 + 2 C_2 C_5 C_L L_2 R_L g_m s^3 + C_2 C_5 C_L L_2 s^3 + C_2 C_5 C_L L_2 s^3 + 4 C_2 C_5 C_L L_2 s^2 + 2 C_2 C_5 L_2 g_m s^2 + 4 C_2 C_5 s + C_2 C_L L_2 g_m s^2 + C_2 C_L L_5 g_m s^2 + 2 C_5 C_L L_5 g_m s^2 + 2 C_5 C_L L_5 g_m s^2 + C_$$

**10.403** INVALID-ORDER-403 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 s^3 + C_2 L_2 g_m s^2 + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m\right)}{s \left(C_2 C_5 C_L L_2 L_5 g_m s^4 + 2 C_2 C_5 C_L L_2 s^3 + C_2 C_5 C_L L_5 s^3 + 4 C_2 C_5 C_L L_5 s^3 + 2 C_2 C_5 L_2 g_m s^2 + 4 C_2 C_5 s + C_2 C_L L_2 g_m s^2 + C_2 C_L s + C_5 C_L L_5 g_m s^2 + 2 C_5 C_L L_5 g_m s^2 + C_5 C_L L_5 g_m s^2$$

**10.404** INVALID-ORDER-404 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 s^3 + C_2 L_2 g_m s^2 + C_2 s + C_5 L_5 g_m s^4 + C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_5 L_5 s^3 + C_2 C_5 L_5 L_5 s^3 + C_2 C_5 L_5 L_5 g_m s^4 + C_2 C_5 L_5 g_m s^4 + C$$

**10.405** INVALID-ORDER-405 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}C_{5}L_{2}L_{5}g_{m}s^{4} - C_{2}C_{5}L_{2}s^{3} + C_{2}C_{5}L_{5}s^{3} + C_{2}L_{2}g_{m}s^{2} + C_{2}s + C_{5}L_{2}g_{m}s^{2} + C_{2}s + C_{5}L_{2}s^{3}}{s\left(C_{2}C_{5}C_{L}L_{2}L_{5}g_{m}s^{4} + 2C_{2}C_{5}L_{L}L_{2}R_{L}g_{m}s^{3} + C_{2}C_{5}C_{L}L_{2}s^{3} + C_{2}C_{5}C_{L}L_{5}s^{3} + 4C_{2}C_{5}C_{L}L_{5}s^{3} + 4C_{2}C_{5}C_{L}R_{L}s^{2} + 2C_{2}C_{5}L_{2}g_{m}s^{2} + 4C_{2}C_{5}s + C_{2}C_{L}L_{5}s^{3} + C_{2}C_{5}C_{L}L_{5}s^{3} + 4C_{2}C_{5}C_{L}L_{5}s^{3} + 4C_{2}C_{5}C_{L}L_{5}s^{2} + 4C_{2}C_{5$$

**10.406** INVALID-ORDER-406 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2 C_5 C_L L_2 L_5 L_L R_L g_m s^6 + C_2 C_5 C_L L_2 L_L R_L s^5 + C_2 C_5 C_L L_5 L_L R_L s^5 + C_2 C_5 L_2 L_5 L_L g_m s^5 + C_2 C_5 L_2 L_5 R_L g_m s^4 + 2 C_2 C_5 L_2 L_L R_L g_m s^4 + C_2 C_5 L_2 L_L R_L s^4 + C_2 C_5 L_2 R_L s^3 + C_2 C_5 R_L g_m s^4 + C_2 C_5 R_L$$

**10.407** INVALID-ORDER-407 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_L L_L R_L s^2 + L_L s + R_L\right) \left(C_2 C_3 C_L L_2 L_L L_2 L_3 S_5 + C_2 C_5 C_L L_2 L_L S_5 + C_2 C_5 C_L L_2 L_2 C_5 C_L L_2 C_5 C_L L_2 L_2 C_5 C_L L$$

10.408 INVALID-ORDER-408 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_5R_Lg_ms^5 + 2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_2R_Ls^4 + C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5R_Ls^4 + 4C_2C_5C_LL_5R_Ls^4 + 4C_2C_5C_LL_5R_Ls^2 + 4C_2C_5C_LL_5R_Ls^2 + 4C_2C_5C_LL_5R_Ls^2 + 4C_2C_5C_LL_5R_Ls^2 + 4C_2C_5C_LL_5R_Ls^$$

**10.409** INVALID-ORDER-409 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 L_5 s^4 + C_2 L_2 L_5 g_m s^3 - C_2 L_2 s^2 + C_2 L_5 s^2 + L_5 g_m s - 1 \right)}{2 C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_2 L_5 s^4 + 4 C_2 C_5 L_5 R_L s^3 + C_2 L_2 L_5 g_m s^3 + 2 C_2 L_2 R_L g_m s^2 + C_2 L_2 s^2 + C_2 L_5 s^2 + 4 C_2 R_L s + 2 C_5 L_5 R_L g_m s^2 + C_5 L_5 s^2 + L_5 g_m s + 2 R_L g_m + 1}$$

**10.410** INVALID-ORDER-410 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2L_5s^4 + C_2L_2L_5g_ms^3 - C_2L_2s^2 + C_2L_5s^2 - C_5L_5s^2 + L_5g_ms - 1}{C_2C_5C_LL_2L_5s^5 + 2C_2C_5L_2L_5g_ms^4 + 4C_2C_5L_5s^3 + C_2C_LL_2L_5g_ms^4 + C_2C_LL_2s^3 + C_2C_LL_2s^3 + 2C_2L_2g_ms^2 + 4C_2s + C_5C_LL_5s^3 + 2C_5L_5g_ms^2 + C_LL_5g_ms^2 +$$

10.411 INVALID-ORDER-411 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

**10.412** INVALID-ORDER-412 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 s^4 - C_2 L_2 L_5 g_m s^3 + C_2 L_2 s^2 - C_2 L_5 s^2 + C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_5 L_5 g_m s^4 + C_5 L_5 L_5 g_m s^4 + C_5 L_5 g_m s^4 + C_$$

**10.413** INVALID-ORDER-413 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_2 L_5 s^4 - C_2 L_2 L_5 g_m s^3 + C_2 L_2 s^2 - C_2 L_5 s^2 + C_2 L_2 L_5 g_m s^4 + C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_4 L_2 L_5 g_m s^4 + C_2 C_4 L_2 L_5 g_m s^4 + C_2 C_4 L_2 L_5 g_m s^4 + C_4 C_5 L_5 L_5 s^3 + C_4 L_5 g_m s^4 + C_5 L_5 g_m s^4 + C_$$

10.414 INVALID-ORDER-414 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

10.415 INVALID-ORDER-415 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, L_L s + R_L + \frac{1}{C_L s}\right)$$

10.416 INVALID-ORDER-416 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2 C_5 C_L L_2 L_5 L_L R_L s^6 + 2 C_2 C_5 L_2 L_5 L_L R_L g_m s^5 + C_2 C_5 L_2 L_5 L_L s^5 + C_2 C_5 L_2 L_5 R_L s^4 + 4 C_2 C_5 L_5 L_L R_L s^4 + C_2 C_L L_2 L_5 L_L R_L g_m s^5 + C_2 C_L L_2 L_L R_L s^4 + C_2 C_L L_5 L_L R_L s^4 + C_$$

10.417 INVALID-ORDER-417 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_Lg_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + 4C_2C_5C_LL_5L_LR_Ls^5 + 2C_2C_5L_2L_5L_Lg_ms^5 + 2C_2C_5L_2L_5R_Lg_ms^4 + C_2C_5L_2L_5s^4 + 4C_2C_5L_5L_Ls^4 + 4C_2C_5L_5R_Ls^3 + 4C_2C_5L_5L_Ls^4 + 4C_2C_5L_Ls^4 +$$

10.418 INVALID-ORDER-418 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_Lg_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_Ls^5 + 4C_2C_5C_LL_5L_LR_Ls^5 + 2C_2C_5L_2L_5R_Lg_ms^4 + C_2C_5L_2L_5s^4 + 4C_2C_5L_5L_Ls^3 + C_2C_LL_2L_5L_Lg_ms^4 + C_2C_5L_5L_Lg_ms^4 + C_2C_5L_5L_Lg_ms^4 + C_2C_5L_5L_Lg_ms^4 + C_2C_5L_5L_Lg_ms^4 + C_2C_5L_5L_Lg_ms^4 + C_2C_5L_Lg_ms^4 + C_2C_5L_$$

**10.419** INVALID-ORDER-419 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_2 R_5 g_m s^3 + 2 C_2 C_5 L_2 g_m s^3 + C_2 C_5 L_2 s^3 + C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_L s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 L_5 g_m s^2 + C_5 R_5 g_m s + 2 C_5 R_5 g_m s$$

10.420 INVALID-ORDER-420 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5g_ms^4 + C_2C_5L_2R_5g_ms^3 - C_2C_5L_2s^3 + C_2C_5L_5s^3 + C_2C_5R_5s^2 + C_2L_2g_ms^2 + C_2s + C_5L_5g_ms^2 + C_5R_5g_ms - C_5s + g_m}{s\left(C_2C_5C_LL_2L_5g_ms^4 + C_2C_5C_LL_2s^3 + C_2C_5C_LL_2s^3 + C_2C_5C_LL_5s^3 + C_2C_5C_LL_2s^3 + C_2C_$$

10.421 INVALID-ORDER-421 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{R_L}{C_L R_L s + 1}\right)$$

10.422 INVALID-ORDER-422 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 s^3 + C_2 C_5 R_5 s^2 + C_2 L_2 g_m s^2 + C_2 s + C_5 C_5 L_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 S^3 + C_2 C_5 C_L L_2 S^3 + C_2 C_5 C_L R_5 s^2 + 4 C_2 C_5 C_L R_5 s^2 + 2 C_2 C_5 L_2 g_m s^2 + 4 C_2 C_5 s + C_2 C_L L_2 R_5 g_m s^3 + C_2 C_5 C_L R_5 s^3 + C_2 C_5 C_L R_5 s^3 + C_2 C_5 C_L R_5 s^2 + C_2 C_5 L_2 g_m s^2 + 4 C_2 C_5 C_L L_2 R_5 g_m s^3 + C_2 C_5 C_L R_5 s^3 + C_2 C_5 C_L R$$

**10.423** INVALID-ORDER-423 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}C_{5}L_{2}L_{5}g_{m}s^{4}+C_{2}C_{5}L_{2}R_{5}g_{m}s^{3}-C_{2}C_{5}L_{2}s^{3}+C_{2}C_{5}L_{5}s^{3}+C_{2}C_{5}R_{5}s^{2}+C_{2}L_{2}g_{m}s^{2}+C_{2}s+C_{2}C_{5}C_{2}L_{2}S_{2}s^{2}+C_{2}C_{5}C_{2}L_{2}S_{2}s^{3}+C_{2}C_{5}C_{2}L_{2}S_{3}s^{2}$$

10.424 INVALID-ORDER-424 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_3 L_4 L_5 L_5 g_m s^4 + C_2 C_5 L_4 L_5 L_5 g_m s^3 - C_2 C_5 L_5 L_5 L_5 g_m s^4 + C_2 C_5 L_4 L_5 L_5 g_m s^4 + C_2 C_5 L_4 L_5 L_5 g_m s^4 + C_2 C_5 L_4 L_5 L_5 g_m s^4 + C_2 C_5 L_5 L_5 L_5 g_m s^4 + C_2 C_5 L_5 L_5 g_m s^4 + C_5 C_5 L_5 L_5 g_m s^4 + C_5 C_5 L_5 L_5 g_m s^5 + C_5 C_5 L_5 L_5 g_m s^5$$

10.425 INVALID-ORDER-425 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}C_{5}L_{2}L_{5}g_{m}s^{4} + C_{2}C_{5}L_{2}R_{5}g_{m}s^{3} - C_{2}C_{5}L_{2}s^{3} + C_{2}C_{5}L_{5}s^{3} + C_{2}C_{5}L_{2}S_{5}s^{3} + C_{2}C_{5}C_{L}L_{2}S_{5}g_{m}s^{4} + C_{2}C_{5}C_{L}L_{2}S_{5}g_{m}s^{4} + C_{2}C_{5}C_{L}L_{2}S_{5}g_{m}s^{3} + C_{2}C_{5}C_{L}L_{2}S_{5}s^{3} + C_{2}C_{5}C_{L}L_{2}S_{5}s$$

10.426 INVALID-ORDER-426 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

10.427 INVALID-ORDER-427 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_2L_s^5 + C_2C_5C_LL_s^5 + C_2C_5C_LL_s^5$$

10.428 INVALID-ORDER-428 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_Ls^4 + C_2C_5$$

10.429 INVALID-ORDER-429 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 L_5 R_5 s^4 + C_2 L_2 L_5 R_5 g_m s^3 - C_2 L_2 L_5 s^3 - C_2 L_2 R_5 s^2 + C_2 L_5 R_5 s^2 - C_5 L_5 R_5 s^2 - C_5 L_5 R_5 s^2 - C_5 L_5 R_5 g_m s^3 + C_2 L_2 L_5 R_5 R_L g_m s^4 + C_2 C_5 L_2 L_5 R_5 s^4 + 4 C_2 C_5 L_5 R_5 R_L s^3 + C_2 L_2 L_5 R_5 g_m s^3 + 2 C_2 L_2 L_5 R_5 R_L g_m s^3 + C_2 L_2 R_5 R_L g_m s^2 + C_2 L_2 R_5 s^2 + C_2 L_5 R_5 s^2 + 4 C_2 L_5 R_5 R_L g_m s^3 + C_2 L_2 R_5 R_L g_m s^3 + C_2 R_L g_m s^3$$

**10.430** INVALID-ORDER-430 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2L_5R_5s^4 + C_2L_2L_5R_5g_ms^3 - C_2L_2L_5s^3 - C_2L_2R_5s^2 + C_2L_5R_5s^2 - C_5L_5R_5s^2 + C_2C_5L_2L_5R_5s^3 + C_2C_4L_5R_5s^3 + C_2$$

10.431 INVALID-ORDER-431 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$$

10.432 INVALID-ORDER-432 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_5R_5R_Ls^4 + 2C_2C_5L_2L_5R_5g_ms^4 + 4C_2C_5L_5R_5s^3 + C_2C_LL_2L_5R_5g_ms^4 + 2C_2C_LL_2L_5R_5g_ms^4 + 2C_2C_LL_2L_5R_5g_ms^4 + 4C_2C_5L_5R_5g_ms^4 + 4C_2C_5L_5R_5g_ms^2 + 4C_2C_5C_5L_5R_5g_ms^2 + 4C_2C_5C_5L_5R_5g_ms^2 + 4C_2C_5C_5L_5R_5g_ms^2 + 4C_2C_5C_5L_5R_5g_ms$$

10.433 INVALID-ORDER-433 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_5g_ms^6 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5L_2L_5R_5g_ms^4 + 4C_2C_5L_5R_5s^3 + 2C_2C_LL_2L_5L_Lg_ms^5 + C_2C_LL_2L_5R_5g_ms^4 + C_2C_LL_2L_5R_5g_ms^4 + 4C_2C_5L_5R_5g_ms^4 + 4C_2C_5R_5g_ms^4 + 4C$$

10.434 INVALID-ORDER-434 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-c_1 + c_2 + c_3 + c_4 + c_4 + c_5 + c_4 + c_4 + c_5 + c_4 + c_4 + c_4 + c_5 + c_4 + c_4 + c_5 + c_5 + c_4 + c_5 + c_5 + c_4 + c_5 + c_5$$

10.435 INVALID-ORDER-435 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_5g_ms^6 + 2C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_5L_LR_5s^5 + 4C_2C_5C_LL_5R_5R_Ls^4 + 2C_2C_5L_2L_5R_5g_ms^4 + 4C_2C_5L_5R_5s^3 + 2C_2C_5C_LL_5R_5s^5 + 4C_2C_5C_LL_5R_5s^5 + 4C_2C_5C_LL_5C_5C_LL_$$

**10.436** INVALID-ORDER-436 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

10.437 INVALID-ORDER-437 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_5s^6 + 4C_2C_5C_LL_5L_LR_5R_Ls^5 + 2C_2C_5L_2L_5L_LR_5g_ms^5 + 2C_2C_5L_2L_5R_5R_Lg_ms^4 + C_2C_5L_2L_5R_5s^4 + 4C_2C_5L_LR_5s^4 + 4C_2C_5L_LR_5s^2 + 4C_$$

10.438 INVALID-ORDER-438 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_Rs^6 + C_2C_5C_LL_2L_5R_5R_Ls^5 + 4C_2C_5C_LL_5L_Rs^6 + 2C_2C_5L_LL_5L_Rs^6 + 4C_2C_5L_LL_5L_Rs^6 + 4C_2C_5L_L$$

**10.439** INVALID-ORDER-439 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$$

10.440 INVALID-ORDER-440 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_5g_ms^4 - C_2C_5L_2L_5s^4 + C_2C_5L_5R_5s^3 + C_2L_2L_5g_ms^3 + C_2L_2R_5g_ms^2 - C_2L_2s^2 + C_2L_5s^2 + C_2R_5s^2}{C_2C_5C_LL_2L_5g_ms^5 + C_2C_5C_LL_2S^5 + C_2C_5C_LL_5S^5 + C_2C_5L_2L_5g_ms^4 + 4C_2C_5L_5S^3 + C_2C_LL_2S_g_ms^4 + C_2C_LL_2S_g_ms^3 + C_2C_LL_2S^3 + C_2C_LL_2S^3$$

10.441 INVALID-ORDER-441 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L}{C_L R_L s + 1}\right)$$

 $H(s) = \frac{R_L}{C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_5R_5R_Ls^4 + C_2C_5L_2L_5R_5g_ms^4 + 2C_2C_5L_2L_5R_Lg_ms^4 + C_2C_5L_2L_5s^4 + C_2C_5L_5R_5s^3 + 4C_2C_5L_5R_Ls^3 + C_2C_LL_5R_Ls^4 + C_2C_5L_5R_Ls^4 + C_2C_5L_5R_L$ 

10.442 INVALID-ORDER-442 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ R_L + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 R_5 g_m s^4 - C_2 C_5 L_2 L_5 s^4 + C_2 C_5 L_4 L_5 R_5 g_m s^4 - C_2 C_5 L_4 L_5 R_5 g_m s^4 + C_4 C_5 L_5 R_5 g_m s^4 + C_5 C_5 L_5 R_5 g_m s^4 +$ 

10.443 INVALID-ORDER-443 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_2 L_5 R_5 g_m s^4 - C_2 C_5 L_2 L_5 s^4 + C_2 C_5 L_5 L_5 R_5 g_m s^4 - C_2 C_5 L_2 L_5 S^4 + C_2 C_5 L_5 L_5 R_5 g_m s^4 + C_2 C_5 L_5 R_5 g_m s^4$ 

**10.444** INVALID-ORDER-444 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

 $H(s) = \frac{L_L}{C_2C_5C_LL_2L_5L_LR_5g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5L_2L_5L_Lg_ms^5 + C_2C_5L_2L_5R_5g_ms^4 + C_2C_5L_2L_5s^4 + 4C_2C_5L_5L_Ls^4 + C_2C_5L_5R_5s^3 + C_2C_LL_5L_Ls^4 + C_2C_5L_5L_Ls^4 + C_2C_5L_Ls^4 + C_2C_5L_Ls^4$ 

10.445 INVALID-ORDER-445 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{\left(C_L L_L s_{12} + C_2 C_5 C_L L_2 L_5 L_2 G_m s_1^6 + C_2 C_5 C_L L_2 L_5 R_5 g_m s_1^5 + 2 C_2 C_5 C_L L_2 L_5 R_L g_m s_1^5 + C_2 C_5 C_L L_2 L_5 s_1^5 + 4 C_2 C_5 C_L L_5 L_L s_1^5 + C_2 C_5 C_L L_5 R_5 s_1^4 + 4 C_2 C_5 C_L L_5 R_L s_1^4 + 2 C_2 C_5 L_2 L_5 g_m s_1^4 + 2 C_2 C_5 C_L L_5 R_5 s_1^4 + 4 C_2 C_5 C_L L_5 R_$ 

**10.446** INVALID-ORDER-446 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_5s^6 + C_2C_5C_LL_5L_LR_5R_Ls^5 + C_2C_5L_2L_5L_LR_5g_ms^5 + 2C_2C_5L_2L_5L_LR_Lg_ms^5 + C_2C_5L_2L_5L_Ls^5 + C_2C_5L_2L_5R_5R_Lg_ms^4}$$

10.447 INVALID-ORDER-447 
$$Z(s) = \left(\infty, L_2 s + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

10.448 INVALID-ORDER-448 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2 C_5 C_L L_2 L_5 L_L R_5 g_m s^6 + 2 C_2 C_5 C_L L_2 L_5 L_L R_L g_m s^6 + C_2 C_5 C_L L_2 L_5 L_L s^6 + C_2 C_5 C_L L_2 L_5 R_5 R_L g_m s^5 + C_2 C_5 C_L L_2 L_5 R_L s^5 + C_2 C_5 C_L L_5 L_L R_5 s^5 + 4$$

10.449 INVALID-ORDER-449 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L\right)$$

10.450 INVALID-ORDER-450 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_5g_ms^4 - C_2C_5L_2L_5s^4 - C_2C_5L_2R_5s^3 + C_2C_5L_5R_5s^3 + C_2L_2R_5g_ms^2 - C_2L_2L_5g_ms^4 - C_2C_5L_2L_5g_ms^4 + C_2C_5L_2L_5g_ms^4 + C_2C_5L_2L_5g_ms^3 + C_2C_5L_5g_ms^3 + C$$

10.451 INVALID-ORDER-451 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_2R_5R_Ls^4 + C_2C_5C_LL_5R_5R_Ls^4 + C_2C_5L_2L_5R_5g_ms^4 + 2C_2C_5L_2L_5R_Lg_ms^4 + C_2C_5L_2L_5R_5g_ms^4 + 2C_2C_5L_2L_5R_5g_ms^4 + 2C_2C_5L_2L_5R_5g_ms^2 + 2C_2C_5$$

10.452 INVALID-ORDER-452 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L + \frac{1}{C_L s}\right)$$

 $H(s) = \frac{(C_L)}{C_2C_5C_LL_2L_5R_5g_ms^5 + 2C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_5s^5 + 2C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_5s^4 + C_2C_5C_LL_5R_5s^4 + 4C_2C_5C_LL_5R_Ls^4 + 4C_2C_5C_LR_5R_Ls^3}$ 

10.453 INVALID-ORDER-453 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + \frac{1}{C_L s}\right)$$

10.454 INVALID-ORDER-454 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_LR_5s^5 + C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5L_2L_5L_Lg_ms^5 + C_2C_5L_2L_5R_5g_ms^4 + C_2C_5L_2L_5s^4 + 2C_2C_5L_2L_LR_5g_ms^5 + 2C_2C_5L_2L_5L_Lg_ms^5 + 2C_2C_5L_2L_5L_2g_ms^5 + 2C_2C_5L_2L_5L_2g_ms^5 + 2C_2C_5L_2L_5L_2g_ms^5 + 2C_2C_5L_2L_5L_2g_ms^5 + 2C_2C_5L_2L_5L_2g_ms^5 + 2C_2C_5L_2L_5L_2g_ms^5 + 2C_2C_5L_2L_2g_ms^5 + 2C_2C_5L_2L_2g_ms^5 + 2C_2C_5L_2L_2g_ms^5 + 2C_2C_5L_2L_2g_ms^5 + 2C_2C_5L_2g_ms^5 + 2C_2C_$$

10.455 INVALID-ORDER-455 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_5R_5g_ms^5 + 2C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_5s^5 + 2C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_5s^4 + 4C_2C_5C_LL_2R_5s^5 + 2C_2C_5C_LL_2R_5g_ms^5 + 2C_2$$

10.456 INVALID-ORDER-456 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

10.457 INVALID-ORDER-457 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

10.458 INVALID-ORDER-458 
$$Z(s) = \left(\infty, \ L_2 s + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5g_ms^6 + 2C_2C_5C_LL_2L_5L_LR_Lg_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5C_LL_2L_LR_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_Rs^6 + C_2C_5C_LL_2L_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_Rs^6 + C_2C_5C_LL_2L_5R_Lg_ms^6 +$$

**10.459** INVALID-ORDER-459 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2L_2R_5g_ms^2 - C_2L_2s^2 + C_2R_2R_5g_ms - C_2R_2s + C_2R_5s + R_5g_m - 1}{C_2C_LL_2R_5g_ms^3 + C_2C_LL_2s^3 + C_2C_LR_2g_sg_s^2 + C_2C_LR_2s^2 + C_2C_LR_2s^$$

**10.460** INVALID-ORDER-460 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1 \right)}{C_2 C_L L_2 R_5 g_m s^3 + C_2 C_L L_2 R_L s^3 + C_2 C_L R_2 R_5 R_L g_m s^2 + C_2 C_L R_5 R_L s^2 + C_2 C_L R_5 R_L s^2 + C_2 L_2 R_5 g_m s^2 + 2 C_2 L_2 R_L g_m s^2 + C_2 L_2 s^2 + C_2 R_2 R_5 g_m s + 2 C_2 R_2 R_L g_m s + C_2 R_2 R_5 g_m s^2 + C_2 R_2 R_5 g_$$

**10.461** INVALID-ORDER-461 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_2 R_5 g_m s^3 + 2 C_2 C_L L_2 R_1 g_m s^3 + C_2 C_L L_2 s^3 + C_2 C_L R_2 R_5 g_m s^2 + 2 C_2 C_L R_2 R_L g_m s^2 + C_2 C_L R_2 s^2 + C_2 C_L R_2$$

**10.462** INVALID-ORDER-462 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}L_{2}R_{5}g_{m}s^{2}-C_{2}L_{2}s^{2}+C_{2}R_{2}R_{5}g_{m}s-C_{2}R_{2}s+C_{2}R_{5}s+R_{5}g_{m}-1\right)}{2C_{2}C_{L}L_{2}L_{2}g_{m}s^{4}+C_{2}C_{L}L_{2}s^{3}+2C_{2}C_{L}L_{2}R_{2}g_{m}s^{3}+4C_{2}C_{L}L_{L}s^{3}+C_{2}C_{L}L_{2}s^{3}+2C_{2}L_{L}g_{m}s^{2}+C_{2}C_{L}R_{2}s^{2}+C_{2}C_{L}R_{2}s^{2}+C_{2}C_{L}R_{2}s^{2}+2C_{2}L_{2}g_{m}s^{2}+2C_{2}R_{2}g_{m}s+4C_{2}s+2C_{2}R_{2}s^{2}+C_{2}R_{2}s^{2$$

**10.463** INVALID-ORDER-463 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_2 g_m s - C_2 R_2 s + C_2 R_5 s + R_5 g_m - 1\right)}{C_2 C_L L_2 L_L R_5 g_m s^4 + C_2 C_L L_L R_2 R_5 g_m s^3 + C_2 C_L L_L R_2 s^3 + C_2 C_L L_L R_5 s^3 + 2 C_2 L_2 L_L g_m s^3 + C_2 L_2 R_5 g_m s^2 + C_2 L_2 R_5 g_m s^2 + 4 C_2 L_L s^2 + C_2 R_5 g_m s^2 + C_2 L_2 R_5 g_m s^2 + C_2 R_5 g_m s^2 + C_$$

**10.464** INVALID-ORDER-464 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}L_{2}R_{5}g_{m}s^{2} - C_{2}L_{2}s^{2} + C_{2}R_{2}R_{5}g_{m}s - C_{2}R_{2}s + C_{2}R_{2}R_{5}g_{m}s - C_{2}R_{2}s + C_{2}R_{2}R_{5}g_{m}s - C_{2}R_{2}s + C_{2}R_{2}R_{5}g_{m}s - C_{2}R_{2}R_$$

10.465 INVALID-ORDER-465 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L s}{C_2 C_L L_2 L_L R_5 R_L g_m s^4 + C_2 C_L L_2 L_L R_L s^4 + C_2 C_L L_L R_2 R_5 R_L g_m s^3 + C_2 C_L L_L R_2 R_L s^3 + C_2 C_L L_L R_5 R_L s^3 + C_2 L_2 L_L R_5 g_m s^3 + 2 C_2 L_2 L_L R_2 g_m s^3 + C_2 L_2 L_L S^3 + C_2 L_$$

**10.466** INVALID-ORDER-466 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{\left(C_L L_L R_L s^2 + L_L s + R_L\right)}{C_2 C_L L_2 L_L R_5 g_m s^4 + 2 C_2 C_L L_2 L_L R_1 g_m s^4 + C_2 C_L L_L R_2 R_5 g_m s^3 + 2 C_2 C_L L_L R_2 R_1 g_m s^3 + C_2 C_L L_L R_2 s^3 + C_2 C_L L_L R_5 s^3 + 4 C_2 C_L L_L R_1 s^3 + 2 C_2 L_L L_2 R_2 g_m s^3 + 2 C_2 C_L L_2 R_2 g_m s^3 + C_2 C_L R_2 g_m s^3 +$$

10.467 INVALID-ORDER-467 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ R_5, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_LL_2L_LR_5g_ms^4 + 2C_2C_LL_2L_LR_Lg_ms^4 + C_2C_LL_2L_Ls^4 + C_2C_LL_2R_5R_Lg_ms^3 + C_2C_LL_2R_Ls^3 + C_2C_LL_LR_2R_5g_ms^3 + 2C_2C_LL_LR_2R_Lg_ms^3 + C_2C_LL_LR_2s^3 + C_$$

**10.468** INVALID-ORDER-468 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, R_L\right)$$

10.469 INVALID-ORDER-469 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2s^3 - C_2C_5R_2s^2 + C_2L_2g_ms^2 + C_2R_2g_ms + C_2s - C_5s + g_m}{s\left(C_2C_5C_LL_2s^3 + C_2C_5C_LR_2s^2 + 2C_2C_5L_2g_ms^2 + 2C_2C_5R_2g_ms + 4C_2C_5s + C_2C_LL_2g_ms^2 + C_2C_LR_2g_ms + C_2C_Ls + C_5C_Ls + 2C_5g_m + C_Lg_m\right)}$$

**10.470** INVALID-ORDER-470 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

10.471 INVALID-ORDER-471 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(-C_2 C_5 L_2 s^3 - C_2 C_5 R_2 s^2 + C_2 L_2 g_m s^2 + C_2 R_2 g_m s + C_2 s - C_5 s + g_m\right)}{s \left(2 C_2 C_5 C_L L_2 R_L g_m s^3 + C_2 C_5 C_L L_2 s^3 + 2 C_2 C_5 C_L R_2 R_L g_m s^2 + C_2 C_5 C_L R_2 s^2 + 4 C_2 C_5 C_L R_L s^2 + 2 C_2 C_5 L_2 g_m s^2 + 2 C_2 C_5 R_2 g_m s + 4 C_2 C_5 s + C_2 C_L L_2 g_m s^2 + C_2 C_L R_2 g_m s^2 + C_2 C_L R$$

10.472 INVALID-ORDER-472 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(-C_2 C_5 L_2 s^3 - C_2 C_5 R_2 s^2 + C_2 L_2 g_m s^2 + C_2 R_2 g_m s + C_2 s - C_5 s + g_m\right)}{s \left(2C_2 C_5 C_L L_2 L_2 g_m s^4 + C_2 C_5 C_L L_2 s^3 + 2C_2 C_5 C_L L_L R_2 g_m s^3 + 4C_2 C_5 C_L L_L s^3 + C_2 C_5 C_L R_2 s^2 + 2C_2 C_5 L_2 g_m s^2 + 2C_2 C_5 R_2 g_m s + 4C_2 C_5 s + C_2 C_L L_2 g_m s^2 + C_2 C_L R_2 g$$

10.473 INVALID-ORDER-473 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_2 C_5 L_2 s^3 - C_2 C_5 R_2 s^2 + C_2 L_2 g_m s^2 + C_2 R_2 g_m s + C_2 s - C_5 s + g_m\right)}{C_2 C_5 C_L L_L L_2 s^5 + C_2 C_5 L_L L_2 g_m s^4 + C_2 C_5 L_2 L_2 g_m s^4 + C_2 C_5 L_2 L_2 g_m s^3 + 4 C_2 C_5 L_L s^3 + C_2 C_5 L_2 L_2 L_2 g_m s^4 + C_2 C_L L_L R_2 g_m s^3 + C_2 C_L R_2 g$$

**10.474** INVALID-ORDER-474 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(-C_{2}C_{5}L_{2}s^{3} - C_{2}C_{5}R_{2}s^{2} + C_{2}L_{2}g_{m}s^{2} + C_{2}C_{5}C_{L}L_{2}g_{m}s^{3} + C_{2}C_{5}C_{L}L_{2}g_{m}s^{3} + 4C_{2}C_{5}C_{L}L_{2}s^{3} + 2C_{2}C_{5}C_{L}L_{2}s^{3} + 2C_{$$

10.475 INVALID-ORDER-475 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{L_L R_L}{C_2 C_5 C_L L_2 L_L R_L s^5 + C_2 C_5 C_L L_L R_2 R_L s^4 + 2 C_2 C_5 L_2 L_L R_L g_m s^4 + C_2 C_5 L_2 L_L s^4 + C_2 C_5 L_2 R_L s^3 + 2 C_2 C_5 L_L R_2 R_L g_m s^3 + C_2 C_5 L_L R_2 s^3 + 4 C_2 C_5 L_L R_L s^3 + C_2 C_5 R_2 R_L s^2}$$

**10.476** INVALID-ORDER-476 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{(C_L L_L R_L s_1 s_2 + C_2 C_5 C_L L_2 L_L R_L s_3 + C_2 C_5 C_L L_2 L_L s_5 + 2 C_2 C_5 C_L L_L R_2 R_L g_m s_4 + C_2 C_5 C_L L_L R_2 s_4 + 4 C_2 C_5 C_L L_L R_L s_4 + 2 C_2 C_5 L_2 L_L g_m s_4 + 2 C_2 C_5 L_2 R_L g_m s_3 + C_2 C_5 L_2 s_3 + 2 C_2 C_5 C_L L_L R_2 s_4 + 4 C_2 C_5 C_L L_L R_L s_4 + 2 C_2 C_5 L_2 L_L g_m s_4 + 2 C_2 C_5 L_2 R_L g_m s_3 + C_2 C_5 L_2 R_L g_m s_4 + 2 C_2 C_5 L_2 R_L g_m s_4 + 2 C_2 C_5 R_L R_2 s_5 + 2 C_2 R_2 R_2 r_5 + 2$$

10.477 INVALID-ORDER-477 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_2R_Ls^4 + 2C_2C_5C_LL_LR_2R_Lg_ms^4 + C_2C_5C_LL_LR_2s^4 + 4C_2C_5C_LL_LR_Ls^4 + C_2C_5C_LR_2R_Ls^3 + 2C_2C_5L_2R_Lg_ms^3 + C_2C_5C_LL_LR_2s^4 +$$

10.478 INVALID-ORDER-478 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 R_5 s^3 - C_2 C_5 R_2 R_5 s^2 + C_2 L_2 R_5 g_m s^2 - C_2 L_2 s^2 + C_2 R_2 R_5 g_m s - C_2 R_2 s + C_2 R_5 s - C_5 R_5 s + C_2 R_5 g_m s^2 + C$$

10.479 INVALID-ORDER-479 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2R_5s^3 - C_2C_5R_2R_5s^2 + C_2L_2R_5g_ms^2 - C_2L_2s^2 + C_2R_2R_5g_ms - C_2R_2s + C_2R_5s - C_5R_5s^2 + C_2C_5R_2R_5g_ms^2 + C_2C_5R_2R_5g_ms^2 + C_2C_5R_2R_5g_ms^3 + C_2C_5R_2R_5g_ms^3 + C_2C_5R_2R_5g_ms^3 + C_2C_5R_2R_5g_ms^2 + C_2C_5R_2R_5g_ms^3 + C_2C_5R_5g_ms^3 + C_2C_5R_5g_m$$

**10.480** INVALID-ORDER-480 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 R_5 -C_2 C_5 L_2 R_5 R_L s^3 + 2C_2 C_5 L_2 R_5 R_L g_m s^3 + C_2 C_5 L_2 R_5 R_L g_m s^3 + 2C_2 C_5 R_2 R_5 R_L g_m s^2 + C_2 C_5 R_2 R_5 s^2 + 4C_2 C_5 R_5 R_L s^2 + C_2 C_L L_2 R_5 R_L g_m s^3 + C_2 C_L R_5 R_L g_m s^3 + C_2 C_L R_5 R_L g_m s$$

10.481 INVALID-ORDER-481 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, R_L + \frac{1}{C_L s}\right)$$

$$\left(C_L R_L s + 1\right) \left(C_2 C_5 I\right)$$

$$H(s) = -\frac{(C_L R_L s + 1)(C_2 C_5 L_2 R_5 R_L g_m s^4 + C_2 C_5 C_L L_2 R_5 s^4 + 2 C_2 C_5 C_L R_2 R_5 R_L g_m s^3 + C_2 C_5 C_L R_2 R_5 s^3 + 4 C_2 C_5 C_L R_5 R_L s^3 + 2 C_2 C_5 L_2 R_5 g_m s^3 + 2 C_2 C_5 R_2 R_5 g_m s^2 + 4 C_2 C_5 R_5 s^2 + C_2 C_5 R_5 R_5 r_2 R_5 r_3 R_5 r_5$$

**10.482** INVALID-ORDER-482 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, L_L s + \frac{1}{C_L s}\right)$$

**10.483** INVALID-ORDER-483 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$L_L s \left(-C_2 C_5 L_2\right)$$

**10.484** INVALID-ORDER-484 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5}{C_5 R_5 s + 1}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_5s^4 + 2C_2C_5C_LL_LR_2g_ms^4 + 4C_2C_5C_LL_LR_5s^4 + 2C_2C_5C_LR_2g_ms^3 + C_2C_5C_LR_2g_ms^3 + 4C_2C_5C_Lg_ms^3 + 4C$$

10.485 INVALID-ORDER-485 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_5R_Ls^5 + C_2C_5C_LL_LR_2R_5R_Ls^4 + 2C_2C_5L_2L_LR_5R_Lg_ms^4 + C_2C_5L_2L_LR_5s^4 + C_2C_5L_2R_5R_Ls^3 + 2C_2C_5L_LR_2R_5R_Lg_ms^3 + C_2C_5L_LR_2R_5s^3 + 4C_2C_5L_LR_5s^3 + 4C_2C_5L_LR_5s^3$$

**10.486** INVALID-ORDER-486 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{R_5}{C_5 R_5 s + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_LR_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_5s^5 + 2C_2C_5C_LL_LR_2R_5R_Lg_ms^4 + C_2C_5C_LL_LR_2R_5s^4 + 4C_2C_5C_LL_LR_5R_Ls^4 + 2C_2C_5L_2L_LR_5g_ms^4 + 2C_2C_5L_2L_Rs_g_ms^3 + 2C_2C_5L_2L_Rs_g_ms^4 + 2C_2C_5L_2L_Rs_g_ms^2 + 2C_2C_5L_2L_Rs_g_ms^2 + 2C_2C_5L_2L_Rs_g_ms^2 +$$

10.487 INVALID-ORDER-487 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5}{C_5 R_5 s + 1}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_LR_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_5s^5 + C_2C_5C_LL_2R_5R_Ls^4 + 2C_2C_5C_LL_LR_2R_5R_Lg_ms^4 + C_2C_5C_LL_LR_2R_5s^4 + 4C_2C_5C_LL_LR_5R_Ls^4 + C_2C_5C_LL_LR_5R_Ls^3 + C_2C_5C_LL_LR_5R_Ls^4 +$$

**10.488** INVALID-ORDER-488 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 L_2 g_m s^2 + C_2 R_2 g_m s + C_2 s + C_5 R_5 g_m s - C_5 s + g_m \right)}{C_2 C_5 L_2 R_5 g_m s^3 + 2 C_2 C_5 L_2 g_m s^3 + C_2 C_5 L_2 s^3 + C_2 C_5 R_2 g_m s^2 + 2 C_2 C_5 R_2 R_2 g_m s^2 + C_2 C_5 R_2 s^2 + C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + 4 C_2 C_5 R_2 s^2 + C_2 L_2 g_m s^2 + C_2 R_2 g_m s + C_2 s + C_2 R_2 g_m s$$

**10.489** INVALID-ORDER-489 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2R_5g_ms^3 - C_2C_5L_2s^3 + C_2C_5R_2g_ms^2 - C_2C_5R_2s^2 + C_2C_5R_2s^2 + C_2L_2g_ms^2 + C_2R_2g_ms + C_2s + C_5R_5g_ms - C_5s + C_5R_5g_ms^2 - C_2C_5L_2g_ms^2 + C_2C_5L_2$$

**10.490** INVALID-ORDER-490 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 R_5 g_m s^3 + C_2 C_5 L_2 R_5$$

10.491 INVALID-ORDER-491 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 C_5 R_5 s^2 + C_2 C_5 C_L L_2 R_5 g_m s^3 + 2 C_2 C_5 C_L L_2 R_5 g_m s^3 + 2 C_2 C_5 C_L L_2 R_5 g_m s^3 + 2 C_2 C_5 C_L R_2 R_5 g_m s^3 + 2 C_2$$

**10.492** INVALID-ORDER-492 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}C_{5}L_{2}R_{5}g_{m}s^{3}-C_{2}C_{5}L_{2}s^{3}+C_{2}C_{5}R_{2}R_{5}g_{m}s^{2}-C_{2}C_{5}R_{2}s^{2}+C_{2}C_{5}R_{5}s^{2}+C_{2}C_{5}R_{5}s^{2}+C_{2}C_{5}C_{L}L_{2}g_{m}s^{4}+C_{2}C_{5}C_{L}L_{2}S_{3}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}L_{2}S_{2}+C_{2}C_{5}C_{L}$$

**10.493** INVALID-ORDER-493 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 C_L L_2 L_2 s^5 + C_2 C_5 C_L L_L R_2 R_5 g_m s^4 + C_2 C_5 C_L L_L R_2 s^4 + C_2 C_5 C_L L_L R_5 s^4 + 2 C_2 C_5 L_2 L_L g_m s^4 + C_2 C_5 L_2 R_5 g_m s^3 + C_2 C_5 L_2 R_5 g_m s^3 + C_2 C_5 L_2 R_5 g_m s^3 + C_2 C_5 L_2 R_5 g_m s^4 + C_2 C_5 L_2 R_5 g_m s^4$$

**10.494** INVALID-ORDER-494 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5 s}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + 6 C_2 C_5 C_L L_2 R_2 g_m s^3 + 2 C_2$$

10.495 INVALID-ORDER-495 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_Ls^5 + C_2C_5C_LL_LR_2R_5R_Lg_ms^4 + C_2C_5C_LL_LR_2R_Ls^4 + C_2C_5C_LL_LR_5R_Ls^4 + C_2C_5L_LL_Rs_g_ms^4 + C_2C_5L_LL_Rs_g_ms^4 + C_2C_5C_LL_Rs_g_ms^4 + C_2C_5C_LL_Rs_$$

**10.496** INVALID-ORDER-496 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2L_LR_2g_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_LR_2R_5g_ms^4 + 2C_2C_5C_LL_LR_2R_Lg_ms^4 + C_2C_5C_LL_LR_2s^4 + C_2C_5C_LL_$$

10.497 INVALID-ORDER-497 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_Ls^4 + C_2C_5C_LL_LR_2R_5g_ms^4 + 2C_2C_5C_LL_LR_2R_Lg_ms^4 + C_2C_5C_LL_2R_Lg_ms^4 + C_2C_$$

**10.498** INVALID-ORDER-498 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 - C_2 C_5 R_2 s^2 + C_2 L_2 g_m s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s^2 - C_5 s + g_m \right)}{C_2 C_5 L_2 L_5 g_m s^4 + 2 C_2 C_5 L_2 R_L g_m s^3 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 + 2 C_2 C_5 R_2 R_L g_m s^2 + C_2 C_5 R_2 s^2 + 4 C_2 C_5 R_L s^2 + C_2 L_2 g_m s^2 + C_2 R_2 g_m s + C_2 s + C_5 L_5 g_m s^2 + C_2 R_2 g_m s + C_2 S_2 R_2 g_m s^2 + C_2 R_2 g_m s^2 +$$

**10.499** INVALID-ORDER-499 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5g_ms^4 - C_2C_5L_2s^3 + C_2C_5L_5g_ms^3 + C_2C_5L_5s^3 - C_2C_5R_2s^2 + C_2L_2g_ms^2 + C_2R_2g_ms + C_2s + C_5L_5g_ms^2 - C_5s}{s\left(C_2C_5C_LL_2L_5g_ms^4 + C_2C_5C_LL_2s^3 + C_2C_5C_LL_5s^3 + C_2C_5C_LL_2s^2 + 2C_2C_5L_2g_ms^2 + 2C_2C_5R_2g_ms + 4C_2C_5s + C_2C_LL_2g_ms^2 + C_2$$

**10.500** INVALID-ORDER-500 
$$Z(s) = \left( \infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L}{C_L R_L s + 1} \right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 S^3 + C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_5 L_5 g_m s^4 + C_2 C_5$$

**10.501** INVALID-ORDER-501 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 - C_2 C_5 R_2 s^2 + C_2 C_5 L_2 L_2 g_m s^3 + C_2 C_5 C_L L_2 g_m s^3 + C_2 C_5 C_L$$

10.502 INVALID-ORDER-502 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}C_{5}L_{2}L_{5}g_{m}s^{4}-C_{2}C_{5}L_{2}s^{3}+C_{2}C_{5}L_{5}R_{2}g_{m}s^{3}+C_{2}C_{5}L_{5}s^{3}-C_{2}C_{5}R_{2}s^{2}+C_{2}C_{5}C_{L}L_{2}S_{2}s^{2}+C_{2}C_{5}C_{L}L_{2}S_{2}s^{3}+C_{2}C_{5}C_{L}L_{2}S_{2}s^$$

**10.503** INVALID-ORDER-503 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + L_2 C_5 C_L L_2 L_2 s^5 + C_2 C_5 C_L L_5 L_L R_2 g_m s^5 + C_2 C_5 C_L L_5 L_L s^5 + C_2 C_5 C_L L_2 L_2 s^4 + C_2 C_5 L_2 L_5 g_m s^4 + 2 C_2 C_5 L_2 L_2 g_m s^4 + C_2 C_5 L_2 L_2 g_m s^4$$

**10.504** INVALID-ORDER-504 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 g_m s^4 - C_2 C_5 L_2 s^3 + C_2 C_5 C_L L_2 R_L g_m s^4 + 2 C_2 C_5 C_L L_2 R_L g_m s^3 + C_2 C_5 C_L L_2 s^3 + C_2 C_5 C_L L_5 R_2 g_m s^3 + C_2 C_5 C_L L_5 s^3 + 2 C_2 C_5 C_L L_L R_2 g_m s^3 + 4 C_2 C_5 C_L L_L s^3 + 2 C_2 C_5 C_L L_2 R_L g_m s^4 + 2 C_2 C_5 C_L L_2 R_L g_m s^3 + C_2 C_5 C_L L_2 R_L g$$

10.505 INVALID-ORDER-505 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

**10.506** INVALID-ORDER-506 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_Lg_ms^6 + 2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_Ls^5 + 2C_2C_5C_LL_LR_2R_Lg_ms^4 + C_2C_5C_LL_LR_2s^4 + 4C_2C_5C_LL_Rs^5 + C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5C$$

10.507 INVALID-ORDER-507 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_5R_Lg_ms^5 + 2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_2R_Ls^4 + C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5$$

**10.508** INVALID-ORDER-508 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 L_5 s^4 - C_2 C_5 L_5 R_2 s^3 + C_2 L_2 L_5 g_m s^3 - C_2 L_2 s^2 + C_2 L_5 R_2 g_m s^2 + C_2 L_5 s^2 - C_2 R_2 s - C_5 L_5 s^2 + C_2 L_2 L_2 R_2 g_m s^3 + C_2 L_2 L_2 R_2 g_m s^2 + C_2 L_2$$

10.509 INVALID-ORDER-509 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2L_5s^4 - C_2C_5L_5R_2s^3 + C_2L_2L_5g_ms^3 - C_2L_2s^2 + C_2L_5R_2g_ms^2 + C_2L_5s^2 - C_2R_2s - C_5L_5}{C_2C_5C_LL_2L_5s^5 + C_2C_5L_LL_5g_ms^4 + 2C_2C_5L_5g_ms^3 + 4C_2C_5L_5s^3 + C_2C_LL_2L_5g_ms^4 + C_2C_LL_2s^3 + C_2C_LL_5R_2g_ms^3 + C_2C_LL_5s^3 + C$$

**10.510** INVALID-ORDER-510 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{R_L \left( -C_2C_5L_2L_5}{C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_5R_2R_Ls^4 + 2C_2C_5L_2L_5R_Lg_ms^4 + C_2C_5L_5L_5R_Lg_ms^3 + C_2C_5L_5R_2s^3 + 4C_2C_5L_5R_Ls^3 + C_2C_LL_2L_5R_Lg_ms^4 + C_2C_LL_2R_Lg_ms^4 + C_2C_LL$$

10.511 INVALID-ORDER-511 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{(C_L R_L s + 1)(C_2 C_5 L_2 L_5 R_2 R_2 R_3 + C_2 C_5 C_L L_2 L_5 S^5 + 2 C_2 C_5 C_L L_5 R_2 R_L g_m S^4 + C_2 C_5 C_L L_5 R_2 S^4 + 4 C_2 C_5 C_L L_5 R_L S^4 + 2 C_2 C_5 L_2 L_5 g_m S^4 + 2 C_2 C_5 L_5 R_2 g_m S^3 + 4 C_2 C_5 L_5 S^3 + C_2 C_L L_5 R_2 S^4 + 4 C_2 C_5 C_L L_5 R_2 S^4 + 4 C_2 C_5 C_L L_5 R_2 S^4 + 2 C_2 C_5 L_5 R_2 g_m S^3 + 4 C_2 C_5 L_5 S^3 + C_2 C_L L_5 R_2 S^4 + 2 C_2 C_5 L_5 R_$$

10.512 INVALID-ORDER-512 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ L_L s + \frac{1}{C_L s}\right)$$

10.513 INVALID-ORDER-513 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

**10.514** INVALID-ORDER-514 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_Lg_ms^6 + 2C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_5s^5 + 2C_2C_5C_LL_5L_Lg_ms^5 + 4C_2C_5C_LL_5L_Ls^5 + 2C_2C_5C_LL_5R_2g_ms^4 + C_2C_5C_LL_5R_2s^4 + 4C_2C_5C_LL_5R_2g_ms^5 + 4C_2C_5C_LL_5L_Ls^5 + 2C_2C_5C_LL_5R_2g_ms^4 + C_2C_5C_LL_5R_2g_ms^4 + C_2C_5C_LL_5R_2g_ms^2 + C_2C_5C_LL_5R$$

10.515 INVALID-ORDER-515 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_Ls^6 + C_2C_5C_LL_5L_LR_2R_Ls^5 + 2C_2C_5L_2L_5L_LR_2g_ms^5 + C_2C_5L_2L_5L_Ls^5 + C_2C_5L_2L_5R_Ls^4 + 2C_2C_5L_5L_LR_2g_ms^4 + C_2C_5L_5L_LR_2s^4 + 4C_2C_5L_5L_LR_2g_ms^4 + C_2C_5L_5L_LR_2g_ms^4 + C_2C_5L_5L_2g_ms^2 + C_2C_5L_2g_ms^2 + C$$

10.516 INVALID-ORDER-516 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_Lg_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + 2C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + 4C_2C_5C_LL_5L_LR_Ls^5 + 2C_2C_5L_2L_5L_Lg_ms^5 + 2C_2C_5L_2L_5L_Lg_ms^6 + 2C_2C_5L_2L_5L_Lg_ms^6 + 2C_2C_5C_LL_5L_LR_2g_ms^6 + 2C_2C_5C_LL_5L_Rg_ms^6 + 2C_2C_5C_LL_5C_LL_5L_Rg_ms^6 + 2C_2C_5C_LL_5C_$$

10.517 INVALID-ORDER-517 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_Lg_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + 4C_2C_5C_LL_5L_LR_Ls^5 + C_2C_5C_LL_5R_Ls^4 + 2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + 4C_2C_5C_LL_5L_LR_2s^5 + 4C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_R_2s^5 + C_2C_LL_5L_R_2s^5 + C_2C_5C_LL_5L_R_2s^5 + C_2C_5C_LL_5L_R_2s^5 + C_2C$$

**10.518** INVALID-ORDER-518 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 s^3 + C_2 C_5 R_2 R_5 g_m s^2 - C_2 C_5 R_2 s^2 + C_2 C_5 R_5 s^2 + C_2 L_2 g_m s^3 + C_2 C_5 L_2 R_5 g_m s^4 + C_2 C_5 L_2 R_5 g_m s^3 + C_2 C_5 R_2 R_5 g_m s^2 + C_2 C_5 R_2 R_2 g_m s^2 + C_2 C_5 R_2 R_5 g_m s^2 + C_2 C_5 R_5 R_$$

10.519 INVALID-ORDER-519 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5g_ms^4 + C_2C_5L_2R_5g_ms^3 - C_2C_5L_2s^3 + C_2C_5L_5s^3 + C_2C_5L_5s^3 + C_2C_5R_2g_ms^2 - C_2C_5R_2s^2 + C_2C_5R_2s^2 + C_2C_5R_2s^2 + C_2C_5R_2s^2 + C_2C_5R_2s^2 + C_2C_5R_2s^3 + C_2C_5C_LL_2s^3 + C_2C_5C_LL_2s^3 + C_2C_5C_LL_2s^3 + C_2C_5C_LL_2s^3 + C_2C_5C_LL_2s^3 + C_2C_5C_LR_2s^2 + C_2C$$

10.520 INVALID-ORDER-520 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_Ls^4 + C_2C_5C_LL_5R_2R_Lg_ms^4 + C_2C_5C_LL_5R_Ls^4 + C_2C_5C_LR_2R_5R_Lg_ms^3 + C_2C_5C_LR_2R_Ls^3 + C_2C_5C_LR_5R_Lg_ms^4 + C_2C_5C_LL_5R_Lg_ms^4 + C_2C_5C_LR_5R_Lg_ms^4 + C_2C_5C_LR_5R_Lg_ms^2 + C_2C_LR_5R_Lg_ms^2 + C_2C_5C_LR_5R_Lg_ms^2 + C_2C_5C_LR_5R_Lg_ms^2 + C_2C_5C_LR_5R_Lg_ms^2 + C_2C_5C_LR_5R_Lg_ms^2 + C_2C_5C_LR_5R_Lg$$

10.521 INVALID-ORDER-521 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 g_m s^4 + C_2 C_5 L_2 R_5 g_m s^3 - C_2 C_5 L_2 s^3 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_4 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_5 g_m s^3 + C_2$$

10.522 INVALID-ORDER-522 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}C_{5}L_{2}L_{5}g_{m}s^{4}+C_{2}C_{5}L_{2}R_{5}g_{m}s^{3}-C_{2}C_{5}L_{2}s^{3}+C_{2}C_{5}L_{5}R_{2}g_{m}s^{3}+C_{2}C_{5}L_{2}S_{2}g_{m}s^{3}+C_{2}C_{5}C_{L}L_{2}S_{2}g_{m}s$$

10.523 INVALID-ORDER-523 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_LR_5g_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_LR_2g_ms^4 + C_2C_5C_LL_LR_2s^4 + C_2C_5C_LL_LR_2s^5 + C_2C_5C_LL_LR_2s$$

10.524 INVALID-ORDER-524 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}C_{5}L_{2}L_{5}g_{m}s^{4} + C_{2}C_{5}L_{2}L_{5}g_{m}s^{4} + C_{2}C_{5}L_{2}L_{2}g_{m}s^{3} + C_{2}C_{5}C_{L}L_{2}S^{3} + C_{2}C_{5}C_{L}L_{5}S^{3} + C_{2}C_{5}C_{L}L_{5}S$$

10.525 INVALID-ORDER-525 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ L_5 s + R_5 + \frac{1}{C_5 s}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_LR_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_RR_2s^5 + C$$

10.526 INVALID-ORDER-526 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, L_5 s + R_5 + \frac{1}{C_5 s}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_5L_LR_2g_ms^5 + C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5$$

10.527 INVALID-ORDER-527 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2L_LR_Lg_ms^5 + C_2C_5C_LL_2L_Ls^5 + C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_Ls^4 + C_2C_5$$

**10.528** INVALID-ORDER-528 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ R_L\right)$$

10.529 INVALID-ORDER-529 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2L_5R_5s^4 - C_2C_5L_2R_5s^3 + C_2L_2L_5R_5g_ms^3}{C_2C_5C_LL_2L_5R_5s^5 + C_2C_5L_LL_5R_5s^4 + 2C_2C_5L_2L_5R_5g_ms^4 + 2C_2C_5L_5R_5g_ms^3 + 4C_2C_5L_5R_5s^3 + C_2C_LL_2L_5s^4 + C_2C_LL_2L_5s^4 + C_2C_LL_2R_5s^3 + C_2C_LL_5R_5g_ms^4 + 2C_2C_5L_5R_5g_ms^4 + 2C_2C_5$$

10.530 INVALID-ORDER-530 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_5R_Ls^5 + C_2C_5C_LL_5R_2R_5R_Ls^4 + 2C_2C_5L_2L_5R_5R_Lg_ms^4 + C_2C_5L_2L_5R_5s^4 + 2C_2C_5L_5R_2R_5R_Lg_ms^3 + C_2C_5L_5R_2R_5s^3 + 4C_2C_5L_5R_5R_Ls^3 + C_2C_LL_2L_5R_5R_Lg_ms^4 + C_2C_5L_5R_5R_Lg_ms^4 + C_2C_5L_5R_5R_Lg_ms^2 + C_2C_5L$$

10.531 INVALID-ORDER-531 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_5s^5 + 2C_2C_5C_LL_5R_2R_5R_Lg_ms^4 + C_2C_5C_LL_5R_2R_5s^4 + 4C_2C_5C_LL_5R_5R_Ls^4 + 2C_2C_5L_2L_5R_5g_ms^4 + 2C_2C_5L_5R_2g_ms^3 + 2C_2C_5C_LL_5R_5g_ms^4 + 2C_2C_5C_LL_5R_5g_ms^2 + 2C_2C_5C_LL_5G_5g_ms^2 + 2C_2C_5C_LL_5g_ms^2 + 2C_2C_5C_LL_5g_ms^2 + 2C_2C_5C_LL_5g_ms^2 + 2C_2C_5C$$

10.532 INVALID-ORDER-532 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_5g_ms^6 + C_2C_5C_LL_2L_5R_5s^5 + 2C_2C_5C_LL_5L_RS_2g_ms^5 + 4C_2C_5C_LL_5L_LR_5s^5 + C_2C_5C_LL_5R_2S^4 + 2C_2C_5L_2L_5R_5g_ms^4 + 2C_2C_5L_5R_2S_2g_ms^3 + 4C_2C_5C_LL_5L_RS_2s^5 + C_2C_5C_LL_5L_RS_2s^5 + C_2C_5C_LL_5R_5s^5 + C_2C_5C_LL_5R_5s^5$$

10.533 INVALID-ORDER-533 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

10.534 INVALID-ORDER-534 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_5g_ms^6 + 2C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_5s^5 + 2C_2C_5C_LL_5L_LR_2R_5g_ms^5 + 4C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5C_LL_5R_2R_5R_Lg_ms^4 + C_2C_5C_LL_5L_LR_5g_ms^5 + 4C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5C_LL_5L_5L_Rs_5s^5 + 2C_2C_5C_LL_5L_5L_Rs_5s^5 + 2C_2C_5C_LL_5L_5L_Rs_5s^5 + 2C_2C_5C_LL_5L_5L_Rs_5s^5 + 2C_2C_5C_LL_5L_5L_Rs_5s^5 + 2C_2C_5C_LL_5L_5L_Rs_5s^5 + 2C_2C_5C_LL_5L_Rs_5s^5 + 2C_2C_5C_LL_5c$$

10.535 INVALID-ORDER-535 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5R_Ls^6 + C_2C_5C_LL_5L_LR_2R_5R_Ls^5 + 2C_2C_5L_2L_5L_LR_5R_Lg_ms^5 + C_2C_5L_2L_5L_LR_5s^5 + C_2C_5L_2L_5R_5R_Ls^4 + 2C_2C_5L_5L_LR_2R_5R_Lg_ms^4 + C_2C_5L_5L_LR_2R_5R_Lg_ms^4 + C_2C_5L_5L_LR_2R_5R_Lg_ms^2 + C_2C_5L_2R_5R_Lg_ms^2 + C_2C_5L_2R_5R_Lg_ms^2 + C_2C_5L_2R_5R_$$

10.536 INVALID-ORDER-536 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_5s^6 + 2C_2C_5C_LL_5L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2R_5s^5 + 4C_2C_5C_LL_5L_LR_5R_Ls^5 + 2C_2C_5L_2L_5L_LR_5g_ms^5 + 2C_2C_5C_LL_5L_LR_5g_ms^5 + 2C_2C_5C_LL_5L_LR_5g_ms^5 + 2C_2C_5C_LL_5L_LR_5g_ms^5 + 2C_2C_5C_LL_5L_LR_5g_ms^5 + 2C_2C_5C_LL_5L_LR_5g_ms^5 + 2C_2C_5C_LL_5L_Rs^5 + 2C_2C_5C_LL_5L_Rs^5$$

10.537 INVALID-ORDER-537 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{1}{C_5 s + \frac{1}{R_5} + \frac{1}{L_5 s}}, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_5s^6 + C_2C_5C_LL_2L_5R_5R_Ls^5 + 2C_2C_5C_LL_5L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2R_5s^5 + 4C_2C_5C_LL_5L_LR_5R_Ls^5 + C_2C_5C_LL_5L_LR_5R_Ls^5 + C_2C_5C_LL_5L_LR_5$$

**10.538** INVALID-ORDER-538 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 R_5 g_m s^4 - C_2 C_5 L_2 L_5 s^4 + C_2 C_5 L_5 R_2 R_5 g_m s^3 - C_2 C_5 L_5 R_2 s^3 + C_2 C_5 L_5 R_5 s^3 + C_2 L_2 L_5 g_m s^3 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5$$

10.539 INVALID-ORDER-539 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_5g_ms^4 - C_2C_5L_2L_5s^4 + C_2C_5L_5R_2g_ms^3 - C_2C_5L_5R_2s^3 + C_2C_5L_5R_5s^3}{C_2C_5C_LL_2L_5R_5g_ms^5 + C_2C_5C_LL_5R_2S_5g_ms^4 + C_2C_5C_LL_5R_2s^4 + C_2C_5C_LL_5R_5s^4 + C_2C_5L_5R_5s^4 + 2C_2C_5L_5R_2g_ms^3 + 4C_2C_5L_5s^3 + C_2C_LL_2L_5g_ms^4 + C_2C_5C_LL_5R_2s^4 +$$

**10.540** INVALID-ORDER-540 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_5R_2R_5R_Lg_ms^4 + C_2C_5C_LL_5R_2R_Ls^4 + C_2C_5C_LL_5R_5R_Ls^4 + C_2C_5L_2L_5R_5g_ms^4 + 2C_2C_5L_2L_5R_Lg_ms^4 + C_2C_5C_LL_5R_2R_Ls^4 + C_2C_5C_LL_5R_5R_Ls^4 + C_2C_5L_2L_5R_5g_ms^4 + 2C_2C_5L_2L_5R_Lg_ms^4 + C_2C_5C_LL_5R_2R_Ls^4 + C_$$

**10.541** INVALID-ORDER-541 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{(C_L R_L s + 1)^2}{C_2 C_5 C_L L_2 L_5 R_5 g_m s^5 + 2 C_2 C_5 C_L L_2 L_5 R_L g_m s^5 + C_2 C_5 C_L L_2 L_5 s^5 + C_2 C_5 C_L L_5 R_2 R_5 g_m s^4 + 2 C_2 C_5 C_L L_5 R_2 R_L g_m s^4 + C_2 C_5 C_L L_5 R_2 s^4 + C_2 C_5 C_L L_5 R_5 s^4 + 4 C_2$$

**10.542** INVALID-ORDER-542 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right)^2}{2C_2 C_5 C_L L_2 L_5 L_L g_m s^6 + C_2 C_5 C_L L_2 L_5 R_5 g_m s^5 + C_2 C_5 C_L L_2 L_5 s^5 + 2C_2 C_5 C_L L_5 L_L R_2 g_m s^5 + 4C_2 C_5 C_L L_5 L_L s^5 + C_2 C_5 C_L L_5 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_5 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_5 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_5 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_5 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_5 R_5 g_m s^4 + C_2 C_5 C_L L_5 R_5 g_m s^6 + C_2 C$$

10.543 INVALID-ORDER-543 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_5s^5 + 2C_2C_5L_2L_5L_Lg_ms^5 + C_2C_5L_2L_5R_5g_ms^4 + C_2C_5L_Ls^2L_2s^2 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_3s^5 + C_2C_5C_LL_5L_2s^5 + C_2C_5C_LL_5L_2s^5 + C_2C_5C_LL_5L_2s^5 + C_2C_5C_LL_5L_2s^5 +$$

10.544 INVALID-ORDER-544 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ L_L s + R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_5R_5g_ms^5 + 2C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_5s^5 + 2C_2C_5C_LL_5L_Lg_ms^5 + 4C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5R_2g_ms^4 + 2C_2C_5C_LL_5R_2g_ms^5 + 4C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5R_2g_ms^4 + 2C_2C_5C_LL_5R_2g_ms^5 + 4C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5R_2g_ms^4 + 2C_2C_5C_LL_5R_2g_ms^5 + 2C_2C_5C_LL_5R_$$

10.545 INVALID-ORDER-545 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_5L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2R_Ls^5 + C_2C_5C_LL_5L_LR_5R_Ls^5 + C_2C_5L_LL_5L_LR_5g_ms^5 + C_2C_5L_LL_5L_LR_5g_ms^5 + C_2C_5C_LL_5L_LR_5g_ms^5 + C_2C_5C_LL_5L_RS_5g_ms^5 + C_2C_5C_LL_5L_RS_5g_ms$$

10.546 INVALID-ORDER-546 
$$Z(s) = \left(\infty, L_2 s + R_2 + \frac{1}{C_2 s}, \infty, \infty, \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5g_ms^6 + 2C_2C_5C_LL_2L_5L_LR_Lg_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_5L_LR_2R_5g_ms^5 + 2C_2C_5C_LL_5L_LR_2R_Lg_ms^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_LR_2s^6 + C_2C_5C_LL_5L_2s^6 + C_2C_5C_LL_5L_2s^6 + C_2C_5C_LL_5L_2s^6 + C_2C_5C_LL_5L_2s^6 + C_2C_5C_LL_5L_2s^6 + C_2C_5C_LL_5L_2s^6 + C_2C_5C_$$

10.547 INVALID-ORDER-547 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{R_L \left(L_L s + \frac{1}{C_L s}\right)}{L_L s + R_L + \frac{1}{C_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5g_ms^6 + 2C_2C_5C_LL_2L_5L_LR_Lg_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_5L_LR_2R_5g_ms^5 + 2C_2C_5C_LL_5L_LR_2R_5g_ms^6 + 2C_2C_5C_LL_5L_RR_2R_5g_ms^6 + 2C_$$

10.548 INVALID-ORDER-548 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 R_5 g_m s^4 - C_2 C_5 L_2 L_5 s^4 - C_2 C_5 L_2 R_5 s^3 + C_2 C_5 L_2 R_5 s^4 - C_2 C_5 L_2 R_5 s^3 + C_2 C_5 L_2 R_5 s^4 + C_2 C_5 L_2 R_5 R_2 R_5 g_m s^4 + C_2 C_5 L_2 R_5 R_2 R_2 g_m s^3 + C_2 C_5 L_2 R_5 R_2 R_2 g_m s^3 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_5 R_2 g_m s^3$$

10.549 INVALID-ORDER-549 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_5g_ms^4 - C_2C_5L_2L_5s^4 - C_2C_5L_2R_5s^3 + C_2C_5C_LL_2R_5s^4 + C_2C_5C_LL_2R_5s^4 + C_2C_5C_LL_2R_5s^4 + C_2C_5C_LL_5R_2s^4 + C$$

10.550 INVALID-ORDER-550 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{R_L}{C_L R_L s + 1}\right)$$

$$H(s) = \frac{1}{C_2 C_5 C_L L_2 L_5 R_5 R_L g_m s^5 + C_2 C_5 C_L L_2 L_5 R_L s^5 + C_2 C_5 C_L L_2 R_5 R_L s^4 + C_2 C_5 C_L L_5 R_2 R_5 R_L g_m s^4 + C_2 C_5 C_L L_5 R_2 R_L s^4 + C_2 C_5 C_L L_5 R_5 R_L s^4 + C_2 C_$$

10.551 INVALID-ORDER-551 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{C_2C_5C_LL_2L_5R_5g_ms^5 + 2C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_5s^5 + 2C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_5s^4 + C_2C_5C_LL_5R_2R_5g_ms^4 + 2C_2C_5C_LL_5R_2R_Lg_ms^4 + C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_5R_Lg_ms^2 + C_2C_5C_LL_2R_5$$

10.552 INVALID-ORDER-552 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_5R_5g_ms^5 + C_2C_5C_LL_2L_5s^5 + 2C_2C_5C_LL_2L_LR_5g_ms^5 + C_2C_5C_LL_2R_5s^4 + 2C_2C_5C_LL_5L_LR_2g_ms^5 + 4C_2C_5C_LL_5L_Ls^5 + C_2C_5C_LL_5L_2R_5g_ms^5 + C_2C_5C_LL_5L_5R_5g_ms^5 + C_2C_5C_LL_5R_5g_ms^5 + C_$$

10.553 INVALID-ORDER-553 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_LR_5s^5 + C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5L_2s^5 + C_2C_5C_LL_5L_2s^5 + C_2C_5C_LL_5L_2s^5 + C_2C_5C_LL_5L_2s^5 + C_2C_5C_LL_5L_2s^5 + C_2C_5C_LL_5L_2s^5 + C_2C$$

10.554 INVALID-ORDER-554 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_Lg_ms^6 + C_2C_5C_LL_2L_5R_5g_ms^5 + 2C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_5s^5 + 2C_2C_5C_LL_2L_LR_5g_ms^5 + 2C_2C_5C_LL_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_5s^4 + 2C_2C_5C_LL_2R_5s^5 + 2C_2C_5C_LL_2R_5g_ms^5 + 2C_$$

10.555 INVALID-ORDER-555 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{1}{C_L s + \frac{1}{R_L} + \frac{1}{L_L s}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_5s^6 + C_2C_5C_LL_2L_LR_5R_Ls^5 + C_2C_5C_LL_5L_LR_2R_5s^6 + C_2C_5C_LL_5L_LR_5s^6 + C_2C_5C_LL_5L_Rs^6 + C$$

**10.556** INVALID-ORDER-556 
$$Z(s) = \left(\infty, \ L_2 s + R_2 + \frac{1}{C_2 s}, \ \infty, \ \infty, \ \frac{R_5 \left(L_5 s + \frac{1}{C_5 s}\right)}{L_5 s + R_5 + \frac{1}{C_5 s}}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = -\frac{1}{C_2C_5C_LL_2L_5L_LR_5g_ms^6 + 2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + 2C_2C_5C_LL_2L_LR_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_5s^5 + C_2C_5C_LL_5L_LR_2g_ms^5 + 2C_2C_5C_LL_5L_LR_5g_ms^5 + 2C_2C_5C_LL_5L_RR_5g_ms^5 + 2C_2C_5C_LL_5L_R$$

10.557 INVALID-ORDER-557 
$$Z(s) = \left(\infty, \ L_2s + R_2 + \frac{1}{C_2s}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = -\frac{1}{C_2C_5C_LL_2L_5L_LR_5g_ms^6 + 2C_2C_5C_LL_2L_5L_LR_Lg_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^6 + C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^6 + C_2C_5C_LL_2L_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^6 + C_2C_5C_LL_2L_$$

10.558 INVALID-ORDER-558 
$$Z(s) = \left(\infty, \ \frac{L_{2}s}{C_{2}L_{2}s^{2}+1} + R_{2}, \ \infty, \ \infty, \ R_{5}, \ \frac{1}{C_{L}s}\right)$$

$$H(s) = \frac{C_2L_2R_2R_5g_ms^2 - C_2L_2R_2s^2 + C_2L_2R_5s^2 + L_2R_5g_ms - L_2s + R_2R_5g_m - R_2 + R_5}{C_2C_LL_2R_2s^3 + C_2C_LL_2R_5s^3 + 2C_2L_2R_2g_ms^2 + 4C_2L_2s^2 + C_LL_2R_5g_ms^2 + C_LL_2s^2 + C_LR_2R_5g_ms + C_LR_2s + C_LR_2s$$

**10.559** INVALID-ORDER-559 
$$Z(s) = \left(\infty, \ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \ \infty, \ \infty, \ R_5, \ \frac{R_L}{C_L R_L s + 1}\right)$$

**10.560** INVALID-ORDER-560 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 L_2 R_2 R_5 g_m s^2 - C_2 L_2 R_2 s^2 + C_2 L_2 R_5 s^2 + L_2 R_5 g_m s - L_2 s + R_2 R_5 g_m - R_2 + L_2 R_5 g_m s^3 + 2 C_2 L_2 R_2 g_m s^3 + 2 C_2 L_2 R_2 g_m s^3 + C_2 C_L L_2 R_2 s^3 + C_2 C_L L_2 R_5 s^3 + 4 C_2 C_L L_2 R_2 g_m s^2 + 4 C_2 L_2 s^2 + C_L L_2 R_5 g_m s^2 + 2 C_L L_2 R_L g_m s^2 + C_L L_2 s^2 + C_L L_2 R_2 g_m s^2 + C$$

**10.561** INVALID-ORDER-561 
$$Z(s) = \left(\infty, \ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \ \infty, \ \infty, \ R_5, \ L_L s + \frac{1}{C_L s}\right)$$

**10.562** INVALID-ORDER-562 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 L_2 R_2 R_5 g_m s^2 - C_2 L_2 R_2 s^2 + C_2 L_2 R_5 s^2 + L_2 R_5 g_m s - L_2 s^2 + C_2 L_2 L_2 R_2 s^2 + C_2 L_2 R$$

**10.563** INVALID-ORDER-563 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 L_2 R_2 R_5 g_m s^2 - C_2 L_2 R_2 s^2 + C_2 L_2 R_2 g_m s^3 + C_2 C_L L_2 R_2 g_m s^3 + C_2 C_L L_2 R_2 s$$

10.564 INVALID-ORDER-564 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

$$H(s) = \frac{1}{C_2 C_L L_2 L_L R_2 R_5 R_L g_m s^4 + C_2 C_L L_2 L_L R_2 R_L s^4 + C_2 C_L L_2 L_L R_5 R_L s^4 + C_2 L_2 L_L R_2 R_5 g_m s^3 + 2 C_2 L_2 L_L R_2 R_5 g_m s^3 + 2 C_2 L_2 L_L R_2 s^3 + C_2 L_2 L_L R_2 s^3 + 4 C_2 L_2 L_L R_2 s^3 + 4 C_2 L_2 L_L R_2 s^3 + C_2 L_2 L_2 R_2 s^$$

**10.565** INVALID-ORDER-565 
$$Z(s) = \left(\infty, \ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \ \infty, \ \infty, \ R_5, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2 C_L L_2 L_L R_2 R_5 g_m s^4 + 2 C_2 C_L L_2 L_L R_2 R_L g_m s^4 + C_2 C_L L_2 L_L R_2 s^4 + C_2 C_L L_2 L_L R_5 s^4 + 4 C_2 C_L L_2 L_L R_2 s^4 + 2 C_2 L_2 L_L R_2 g_m s^3 + 4 C_2 L_2 L_L s^3 + C_2 L_2 R_2 R_5 g_m s^2 + 2 C_2 L_2 R_2 R_5 g_m s^2 + 2 C_2 L_2 R_2 R_5 g_m s^2 + 2 C_2 R_5 g_m s^$$

**10.566** INVALID-ORDER-566 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

10.567 INVALID-ORDER-567 
$$Z(s) = \left(\infty, \ \frac{L_{2s}}{C_{2}L_{2}s^{2}+1} + R_{2}, \ \infty, \ \infty, \ \frac{1}{C_{5}s}, \ R_{L}\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 - C_5 L_2 s^2 - C_5 R_2 s + L_2 g_m s + R_2 g_m + 1 \right)}{2 C_2 C_5 L_2 R_2 g_m s^3 + C_2 C_5 L_2 R_2 s^3 + 4 C_2 C_5 L_2 R_L s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + 2 C_5 L_2 R_L g_m s^2 + C_5 L_2 s^2 + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + 4 C_5 R_L s + L_2 g_m s + R_2 g_m + 1}$$

**10.568** INVALID-ORDER-568 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{-C_2C_5L_2R_2s^3 + C_2L_2R_2g_ms^2 + C_2L_2s^2 - C_5L_2s^2 - C_5R_2s + L_2g_ms + R_2g_m + 1}{s\left(C_2C_5C_LL_2R_2g_ms^2 + 4C_2C_5L_2s^2 + C_2C_LL_2R_2g_ms^2 + C_2C_LL_2s^2 + C_5C_LL_2s^2 + C_5C_LR_2s + 2C_5L_2g_ms + 2C_5R_2g_m + 4C_5 + C_LL_2g_ms + C_LR_2g_m + 4C_5 + C_LL_2g_ms + C_LR_2g_m + 4C_5 + C_LR_2g_$$

**10.569** INVALID-ORDER-569 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls+1}\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 - C_5 L_2 s^2 - C_5 R_2 g_m s^2 + C_2 L_2 g_m$$

10.570 INVALID-ORDER-570 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(-C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 - C_5 L_2 s^2 - C_5 R_2 s + L_2 g_m s^2 + C_2 C_5 L_2 R_2 g_m s^3 + C_2 C_5 C_L L_2 R_2 s^3 + 4 C_2 C_5 L_2 R_2 g_m s^2 + 4 C_2 C_5 L_2 R_2 g_m s^2 + C_2 C_L L_2 R_2 g_m s^2 + C_2 C_L L_2 R_2 g_m s^2 + C_3 C_L L_2 R_2 g_m s^2 + C_5 C_L L_2 R_$$

10.571 INVALID-ORDER-571 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(-C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 - C_5 L_2 s^2 - C_5 R_2 s + L_2 g_m s^2 + C_2 C_2 L_2 L_2 R_2 g_m s^4 + 4 C_2 C_5 C_L L_2 L_2 R_2 s^3 + 2 C_2 C_5 L_2 R_2 g_m s^2 + 4 C_2 C_5 L_2 R_2 g_m s^2 + C_2 C_L L_2 R_2 g_m s^2 + C_2 C_L L_2 R_2 g_m s^3 + C_5 C_L L_2 L_2 g_m s^3 + C_5 C_L L_2 R_2 g_m s^2 + C_$$

10.572 INVALID-ORDER-572 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

$$H(s) = \frac{L_L s \left(-C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 - C_5 L_2 s^2 - C_5 L_2 s^2 - C_5 L_2 L_2 L_2 R_2 g_m s^2 + C_2 L_2 R_2 g_m s^2$$

10.573 INVALID-ORDER-573 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(-C_{2}C_{5}L_{2}R_{L}s + 1\right)\left(-C_{2}C_{5}L_{L}s + 1\right)\left(-C_{2}C_{5}L_{L}s + 1\right)\left(-C_{2}C_{5}L_{L}s + 1\right)\left(-$$

10.574 INVALID-ORDER-574 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_2R_Ls^5 + 2C_2C_5L_2L_LR_2R_Lg_ms^4 + C_2C_5L_2L_LR_2s^4 + 4C_2C_5L_2L_LR_2s^4 + 4C_2C_5L_2L_LR_2s^4 + C_2C_5L_2L_LR_2s^3 + C_2C_LL_2L_LR_2R_Lg_ms^4 + C_2C_LL_2L_LR_2s^4 + C_2C_LL_2L_2L_2R_2s^4 + C_2C_LL_2L_2R_2s^4 + C_2C_LL_2L_2R$$

10.575 INVALID-ORDER-575 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_LR_2R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_LR_Ls^5 + 2C_2C_5L_2L_LR_2g_ms^4 + 4C_2C_5L_2L_Ls^4 + 2C_2C_5L_2R_Lg_ms^3 + C_2C_5L_2R_2s^3 + 4C_2C_5L_2R_Ls^3 + C_2C_5L_2R_Ls^3 + C_2C_5L_2R_Ls$$

10.576 INVALID-ORDER-576 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_LR_2R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_LR_Ls^5 + C_2C_5C_LL_2R_2R_Ls^4 + 2C_2C_5L_2R_2R_Lg_ms^3 + C_2C_5L_2R_2s^3 + 4C_2C_5L_2R_Ls^3 + C_2C_LL_2L_LR_2g_ms^4 + C_2C_5L_2R_Ls^4 + 2C_2C_5L_2R_Lg_ms^3 + C_2C_5L_2R_Ls^3 + 4C_2C_5L_2R_Ls^3 + C_2C_5L_2R_Ls^4 + 2C_2C_5L_2R_Ls^4 + 2C_2C_5L_2R_Ls^3 + 4C_2C_5L_2R_Ls^3 +$$

10.577 INVALID-ORDER-577 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ R_L\right)$$

**10.578** INVALID-ORDER-578 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{-C_2C_5L_2R_2R_5s^3 + C_2L_2R_2S_6g_ms^2 - C_2L_2R_2s^2 + C_2L_2R_5s^2 - C_5L_2R_5s^2 - C_5R_2g_ms^2 - C_2C_5C_LL_2R_2S_5g_ms^3 + 4C_2C_5L_2R_5s^3 + C_2C_LL_2R_2S_3s^3 + C_2C_LL_2R_2S_3s^3 + 2C_2L_2R_2g_ms^2 + 4C_2L_2s^2 + C_5C_LL_2R_5s^3 + C_5C_LR_2R_5s^3 + C_5C_LR_2R_5$$

10.579 INVALID-ORDER-579 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ \frac{R_L}{C_LR_Ls+1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2R_2R_5R_Ls^4 + 2C_2C_5L_2R_2R_5R_Lg_ms^3 + C_2C_5L_2R_2R_5s^3 + 4C_2C_5L_2R_5R_Ls^3 + C_2C_LL_2R_2R_5R_Lg_ms^3 + C_2C_LL_2R_2R_Ls^3 + C_2C_LL_2R_5R_Ls^3 + C_2C_LL_2R_5R_Ls^2 + C_2C_LL_2R_5R_Ls^2 + C_2C_LL_2R_5R_Ls^2 + C_2C_LL_2R_5R_Ls^2 + C_2C_LL_2R_Ls^2 + C_2C_LL_2R_Ls^2 + C_$$

10.580 INVALID-ORDER-580 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2R_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_2R_5s^4 + 4C_2C_5C_LL_2R_5R_Ls^4 + 2C_2C_5L_2R_2R_5g_ms^3 + 4C_2C_5L_2R_5s^3 + C_2C_LL_2R_2R_5g_ms^3 + 2C_2C_LL_2R_2R_2g_ms^3 + C_2C_LL_2R_2R_5g_ms^3 + C_2C_LL_2R$$

10.581 INVALID-ORDER-581 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_LR_2R_5g_ms^5 + 4C_2C_5C_LL_2L_LR_5s^5 + C_2C_5C_LL_2R_2R_5s^4 + 2C_2C_5L_2R_2R_5g_ms^3 + 4C_2C_5L_2R_5s^3 + 2C_2C_LL_2L_LR_2g_ms^4 + 4C_2C_LL_2L_Ls^4 + C_2C_LL_2R_2R_5g_ms^3 + 4C_2C_5L_2R_5s^3 + 2C_2C_LL_2L_LR_2g_ms^4 + 4C_2C_LL_2L_Ls^4 + C_2C_LL_2R_2g_ms^4 + 4C_2C_LL_2R_2g_ms^4 + 4C_2C_LL_2R_2g_ms^2 + 4C_2C_LL_2R_2g_ms$$

10.582 INVALID-ORDER-582 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_2R_5s^5 + 2C_2C_5L_2L_LR_2R_5g_ms^4 + 4C_2C_5L_2L_LR_5s^4 + C_2C_5L_2R_2R_5s^3 + C_2C_LL_2L_LR_2R_5g_ms^4 + C_2C_LL_2L_LR_2s^4 + C_2C_LL_2L_2L_2R_2s^4 + C_2C_LL_2L_2R_2s^4 + C_2C_LL_2R_2s^4 + C_2C_LL_$$

10.583 INVALID-ORDER-583 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_LR_2R_5g_ms^5 + 4C_2C_5C_LL_2L_LR_5s^5 + 2C_2C_5C_LL_2R_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_2R_5s^4 + 4C_2C_5C_LL_2R_5R_Ls^4 + 2C_2C_5L_2R_2R_5g_ms^3 + 4C_2C_5L_2R_5s^3 + 2C_2C_5C_LL_2R_5s^3 + 2C_$$

10.584 INVALID-ORDER-584 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

**10.585** INVALID-ORDER-585 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$$

10.586 INVALID-ORDER-586 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s+1}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

**10.587** INVALID-ORDER-587 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 R_2 g_m s^3 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_5 L_2 R_5 g_m s^2 - C_5 L_2 s^2 + C_5 R_2 R_5 g_m s - C_5 R_2 R_5 g_m s^2 + C_2 C_5 L_2 R_2 R_5 g_m s^3 + 2 C_2 C_5 L_2 R_2 g_m s^3 + C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + 4 C_2 C_5 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_5 L_2 R_5 g_m s^2 + 2 C_5 L_2 R_2 g_m s^2 + C_5 L_2 R_5 g_m s^2 + C_5$$

10.588 INVALID-ORDER-588 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2C_5L_2R_2S_3 - C_2C_5L_2R_2s^3 + C_2C_5L_2R_2s^3 + C_2L_2R_2g_ms^2 + C_2L_2s^2 + C_5L_2R_5g_ms^2 - C_5L_2s^2 + C_5R_2R_5g_ms^2 + C_5R_5g_ms^2 + C_5R_5g_ms^2$$

**10.589** INVALID-ORDER-589 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls+1}\right)$$

$$H(s) = \frac{R_L \left( C_2 - C_2 C_3 C_4 L_2 R_2 R_5 R_L g_m s^4 + C_2 C_5 C_4 L_2 R_2 R_L s^4 + C_2 C_5 C_4 L_2 R_5 R_L s^4 + C_2 C_5 L_2 R_2 R_5 g_m s^3 + 2 C_2 C_5 L_2 R_2 R_L g_m s^3 + C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + 4 C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + 4 C_2 C_5 L_2 R_5 s^3 + 4 C_2 C_5 L_2 R_5 s^3 + C_2 C_5 L_2 R_5 R_5 s^3 + C_2 C_5 L_2 R_5 r_5 R_5 s^3 + C_2 C_5 L_2 R_5 R_5$$

**10.590** INVALID-ORDER-590 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 R_2 R_5 g_m s^3 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + C_2 L_2 R_2 s^3 + C_2 C_5 L$$

**10.591** INVALID-ORDER-591 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_2 R_2 R_5 g_m s^3 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + C_2 L_2 L_2 R_5 g_m s^3 - C_2 C_5 L_2 R_2 R_5 g_m s^3 + C_2 C_5 L_2 R_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_2 g_m s^2 + 4 C_2 C_5 L_2 R_2 g_m s^2 + 4 C_2 C_5 L_2 R_2 g_m s^2 + C_2 C_L L$$

10.592 INVALID-ORDER-592 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

$$H(s) = \frac{L_L s \left(C_5 + \frac{1}{2} \left(C_5 + \frac{1}{$$

10.593 INVALID-ORDER-593 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 C_3 C_L L_2 L_L R_2 g_m s^4 + 4 C_2 C_5 C_L L_2 L_L s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + 2 C_2 C_5 C_L L_2 R_2 R_L g_m s^3 + C_2 C_5 C_L L_2 R_2 s^3 + C_2 C_5 C_L L_2 R_2 s^3 + 4 C_2 C_5 C_L L_2 R_L s^3 + 2 C_2 C_5 L_2 R_2 g_m s^4 + 4 C_2 C_5 C_L L_2 R_L s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + 2 C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + 4 C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + 2 C_2 C_5$$

10.594 INVALID-ORDER-594 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{L_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2R_Ls^5 + C_2C_5C_LL_2L_Rs_Rl_Ls^5 + C_2C_5L_2L_LR_2R_5g_ms^4 + 2C_2C_5L_2L_LR_2R_Lg_ms^4 + C_2C_5L_2L_LR_2s^4 + C_2C_5L_2L_2L_2s^4 + C_2C_5L_2L_2s^4 + C_2C_5L_2L_2s^4 + C_2C_5L_2L_2s^4 + C_2C_5L_2L_2s^4 + C_2C_5L_2L_2s^4 + C_2C_5L_2L_2s^4 + C_2C_5L_2s^4 + C_2C_5L_2s^4 + C_2C_5L_2s^4 + C_2C_5L_2s^2 + C_2C_5L_2s^2 + C_2C_5L_2s^2 + C_2C_5L_2s^2 + C_2C_5L_2s^2 + C_2C_5L_2s^2 + C_2C_5L_2$$

10.595 INVALID-ORDER-595 
$$Z(s) = \left(\infty, \ \frac{L_2 s}{C_2 L_2 s^2 + 1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5 s}, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_2R_5g_ms^5 + 2C_2C_5C_LL_2L_LR_2g_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_LR_5s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + 2C_2C_5L_2L_LR_2g_ms^4 + 4C_2C_5L_2L_Ls^4 + C_2C_5L_2L_LR_2s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_2L_2s^5 + 4C_2C_5C_LL_2L_2c^5 + 4C_2C_5C_LL_2c^5 + 4C_2C_5C_LL_2c^5$$

10.596 INVALID-ORDER-596 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_2R_5g_ms^5 + 2C_2C_5C_LL_2L_LR_2R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_LR_5s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2R_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_2R_2R_Ls^4}$$

**10.597** INVALID-ORDER-597 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 - C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_5 L_2 L_5 g_m s^3 - C_5 L_2 s^2 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 R_2 g_m s^3 + C_5 L_2 R_2$$

**10.598** INVALID-ORDER-598 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_2g_ms^4 + C_2C_5L_2L_5s^4 - C_2C_5L_2R_2s^3 + C_2L_2R_2g_ms^2 + C_2L_2s^2 + C_5L_2L_5g_ms^3 - C_5L_2s^2 + C_5L_5R_2g_ms^3 - C_5L_2s^2 + C_5L_5R_2g_ms^3 - C_5L_2s^2 + C_5L_5R_2g_ms^3 + C_5L_5R_2g_ms^2 + C_5R_5R_2g_ms^2 + C$$

**10.599** INVALID-ORDER-599 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls+1}\right)$$

**10.600** INVALID-ORDER-600 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 - C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 R_2 r_3 + C_2 C_5 L_2 R_2 r_3 + C_2 C$$

**10.601** INVALID-ORDER-601 
$$Z(s) = \left(\infty, \ \frac{L_{2s}}{C_2 L_2 s^2 + 1} + R_2, \ \infty, \ \infty, \ L_5 s + \frac{1}{C_5 s}, \ L_L s + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 - C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 r^4 + C_2 C_5 L_2 L_2 R$$

**10.602** INVALID-ORDER-602 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

10.603 INVALID-ORDER-603 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

10.604 INVALID-ORDER-604 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_2R_2R_Ls^5 + C_2C_5L_2L_5L_LR_2g_ms^5 + C_2C_5L_2L_5L_Ls^5 + C_2C_5L_2L_5R_2R_Lg_ms^4 + C_2C_5L_2L_5R_Ls^4 + 2C_2C_5L_2L_5R_Ls^6 + C_2C_5L_2L_5R_Ls^6 +$$

**10.605** INVALID-ORDER-605 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$$

10.606 INVALID-ORDER-606 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5C_LL_2L_LR_2g_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2R_2s^5 + 4C_2C_5C_LL_2R$$

**10.607** INVALID-ORDER-607 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 L_5 R_2 s^4 + C_2 L_2 L_5 R_2 g_m s^3 + C_2 L_2 L_5 s^3 - C_2 L_2 R_2 s^2 - C_5 L_2 L_5 s^3 - C_5 L_5 R_2 g_m s^3 + C_2 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 R_2 s^4 + 4 C_2 C_5 L_2 L_5 R_2 g_m s^3 + C_2 L_2 L_5 s^3 + 2 C_2 L_2 R_2 R_2 g_m s^2 + C_2 L_2 R_2 s^2 + 4 C_2 L_2 R_L s^2 + 2 C_5 L_2 L_5 R_L g_m s^3 + C_5 L_2 L_5 R_2 g_m s^3 + C_5 L_2 L_5 R_2 g_m s^3 + C_5 L_5 R_5 g_m s^3 + C$$

**10.608** INVALID-ORDER-608 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{-C_2C_5L_2L_5R_2s^4 + C_2L_2L_5R_2g_ms^3 + C_2L_2L_5s^3 - C_2L_2R_2s^2 - C_5L_2L_5s^3 - C_5L_5R_2g_ms^3 + C_2L_2L_5R_2g_ms^3 + C_2L_2L_5R_2g_ms^4 + C_2C_LL_2L_5R_2g_ms^4 + C_2C_LL_2L_5s^4 + C_2C_LL_2L_5s^4 + C_2C_LL_2R_2s^3 + 2C_2L_2R_2g_ms^2 + 4C_2L_2s^2 + C_5C_LL_2L_5s^4 + C_5C_LL_5R_2g_ms^4 + C_5C_LL_2L_5s^4 + C_5C_LL_2L$$

**10.609** INVALID-ORDER-609 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{R_L}{C_LR_Ls+1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_Ls^5 + 2C_2C_5L_2L_5R_2R_Lg_ms^4 + C_2C_5L_2L_5R_2s^4 + 4C_2C_5L_2L_5R_Ls^4 + C_2C_LL_2L_5R_2g_ms^4 + C_2C_LL_2L_5R_Ls^4 + C_2C_LL_2L_2L_2R_Ls^4 + C_2C_LL_2L_2R_Ls^4 + C_2C_LL_2L_2R_Ls^4 + C_2C_LL_2L_2R_Ls^$$

**10.610** INVALID-ORDER-610 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + C_2C_LL_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5R_2g_ms^2 + 4C_2C_5L_2L_5R_2g_ms^2 + 4C_2C_5L_2L_5R_2g_ms^2 + 4C_2C_5L_2L_5R_2g_ms^2 + 4C_2C_5L$$

10.611 INVALID-ORDER-611 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2s^5 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + C_2C_LL_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5R_2g_ms^2 + 4C_2C_5L_2L_5R_2g_ms^2 + 4C_2C_5L_2L_5R_2g_ms^2 + 4C_2C_5L_2L_5R_2g_ms^2 + 4C_2C_5L$$

**10.612** INVALID-ORDER-612 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2s^6 + 2C_2C_5L_2L_5L_LR_2g_ms^5 + 4C_2C_5L_2L_5L_Ls^5 + C_2C_5L_2L_5R_2s^4 + C_2C_LL_2L_5L_LR_2g_ms^5 + C_2C_LL_2L_5L_Ls^5 + C_2C_LL_2L_5L_LR_2s^4 + C_2L_2L_5R_2g_ms^3 + C_2C_LL_2L_5L_LR_2s^4 + C_2C_LL_2L_5L_2L_2s^4 + C_2C_LL_2L_2L_2L_2s^4 + C_2C_LL_2L_2L_2s^4 + C_2C_LL_2L_2L_2s^4 + C_2C_LL_2L_2s^4 + C_2C_LL_2L_2s^4 + C_2C_LL_2s^2 +$$

10.613 INVALID-ORDER-613 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + 2C_2C_5C_LL_2L_5R_2g_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + C_2C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + C_2C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_2C_5C_LL_2L_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C$$

10.614 INVALID-ORDER-614 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

**10.615** INVALID-ORDER-615 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$$

10.616 INVALID-ORDER-616 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_2R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + 4C_2C_5C_LL_2L_5L_LR_Ls^6 + C_2C_5C_LL_2L_5R_2R_Ls^5 + 2C_2C_5L_2L_5R_2R_Lg_ms^4 + C_2C_5L_2L_5R_2s^4 + 4C_2C_5L_2L_5R_Ls^4 - C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5R_2s^6 + C_2C_5C_LL_2L_2C_5C_LL_2L_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C_$$

**10.617** INVALID-ORDER-617 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 + C_2 C_5 L_2 R_2 R_5 g_m s^3 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_5 L_2 L_5 g_m s^3 + C_2 C_5 L_2 R_2 g_m s^3$$

**10.618** INVALID-ORDER-618 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_2g_ms^4 + C_2C_5L_2L_5s^4 + C_2C_5L_2R_2g_ms^3 - C_2C_5L_2R_2s^3 + C_2C_5L_2R_2s^3 + C_2L_2R_2g_ms^2 + C_2R_2g_ms^2 + C_2R_2g_ms^2$$

**10.619** INVALID-ORDER-619 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls+1}\right)$$

**10.620** INVALID-ORDER-620 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 + C_2 C_5 L_2 R_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_2 S^3 + C_2 C_5 C_L L_2 R_5 s^3 + 4 C_2 C_5 C_L L_2 R_2 S^3 + 2 C_2 C_5 L_2 R_2 g_m s^3 + C_2 C_5 C_L L_2 R_2 S^3 + C_2 C_5 C_L L_2 R_5 S^3 + 4 C_2 C_5 C_L L_2 R_2 S^3 + C_2 C_5 C_L L$$

10.621 INVALID-ORDER-621 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_{L}L_{S}^{2}+1\right)\left(C_{2}C_{5}L_{2}L_{5}R_{2}g_{m}s^{4}+C_{2}C_{5}L_{2}L_{5}s^{4}+C_{2}C_{5}L_{2}R_{2}R_{5}g_{m}s^{4}+C_{2}C_{5}L_{2}L_{5}s^{4}+C_{2}C_{5}L_{2}L_{2}R_{2}g_{m}s^{4}+C_{2}C_{5}C_{L}L_{2}L_{2}S^{4}+C_{2}C_{5}C_{L}L_{2}L_{2$$

10.622 INVALID-ORDER-622 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_LR_2g_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_LR_3s^5 + C_2C_5L_2L_5R_2g_ms^4 + C_2C_5L_2L_5s^4 + 2C_2C_5L_2L_LR_3s^5 + C_2C_5C_LL_2L_LR_3s^5 + C_2C_5C_LL_2L_LR_3s^5 + C_2C_5L_2L_2L_2R_3s^5 + C_2C_5L_2L_2R_3s^5 + C_2C_5L_2R_3s^5 + C_2C_5L_2R_3s^5$$

10.623 INVALID-ORDER-623 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + C_L R_L R_L s + C_L R_L R_L s + C_L R_L$$

10.624 INVALID-ORDER-624 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_Ls^6 + C_2C_5C_LL_2L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2R_Ls^5 + C_2C_5C_LL_2L_LR_5R_Ls^5 + C_2C_5L_2L_5L_LR_2g_ms^5 + C_2C_5L_2L_5L_4R_2g_ms^5 + C_2C_5C_LL_2L_4R_5R_Ls^5 + C_2C_5C_LL_2L_4R_5R_Ls^5 + C_2C_5C_LL_2L_4R_5R_Ls^5 + C_2C_5C_LL_4R_5R_Ls^5 + C_2C_5C_LR_4R_5R_Ls^5 + C_2C_5C_LR_5R_Ls^5 + C$$

10.625 INVALID-ORDER-625 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$$

10.626 INVALID-ORDER-626 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_2L_LR_2R_5g_ms^5 + 2C_2C_5C_LL_2L_LR_2R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2R_Lg_ms^5 + C_2C_5C_LL_2L_2R_Lg_ms^5 + C_2C_5C_LL_2L_2R_Lg_ms^5 + C_2C_5C_LL_2L_2R_Lg_ms^5 + C_2C_5C_LL_2L_2R_Lg_ms^5 + C_2C_5C_LL_2L_2R_Lg_ms^5 + C_2C_5C_LL_2R_Lg_ms^5 + C_2C_L$$

10.627 INVALID-ORDER-627 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ R_L\right)$$

10.628 INVALID-ORDER-628 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{-C_2C_5L_2L_5R_2R_5s^4 + C_2L_2L_5R_2R_5s^4 + C_2L_2L_5R_2s^4 + C_2L_2L_5$$

10.629 INVALID-ORDER-629 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_5R_Ls^5 + 2C_2C_5L_2L_5R_2R_5R_Lg_ms^4 + C_2C_5L_2L_5R_2R_5s^4 + 4C_2C_5L_2L_5R_5R_Ls^4 + C_2C_LL_2L_5R_2R_5R_Lg_ms^4 + C_2C_LL_2L_5R_2R_Ls^4 + C_2C_LL_2L_2R_Ls^4 + C_2C_LL_2L_2R_Ls^4 + C_2C_LL_2L_2R_Ls^4 + C_2C_LL_2L_2R_Ls^4 + C_2C_LL_2R_Ls^4 + C_2C_LL_2R_Ls^$$

10.630 INVALID-ORDER-630 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5R_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2R_5s^5 + 4C_2C_5C_LL_2L_5R_5R_Ls^5 + 2C_2C_5L_2L_5R_2R_5g_ms^4 + 4C_2C_5L_2L_5R_5s^4 + C_2C_LL_2L_5R_2g_ms^4 + 2C_2C_LL_2L_5R_2R_5g_ms^4 + 4C_2C_5L_2L_5R_2s^4 + C_2C_LL_2L_5R_2g_ms^4 + 2C_2C_LL_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5R_2g_ms^2 + 4C_2C_5L_2L_5R_2g_m$$

10.631 INVALID-ORDER-631 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_2R_5g_ms^6 + 4C_2C_5C_LL_2L_5L_LR_5s^6 + C_2C_5C_LL_2L_5R_2R_5s^5 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5R_5s^4 + 2C_2C_LL_2L_5L_LR_2g_ms^5 + 4C_2C_LL_2L_5L_Ls^5}{2C_2C_3C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_LR_5s^6 + C_2C_5C_LL_2L_5R_2s^5 + 2C_2C_5L_2L_5R_2s^6 + 4C_2C_5L_2L_5L_LR_2g_ms^5 + 4C_2C_5L_2L_5L_LR_2s^6}$$

10.632 INVALID-ORDER-632 
$$Z(s) = \left(\infty, \ \frac{L_{2s}}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{L_{Ls}}{C_LL_Ls^2+1}\right)$$

10.633 INVALID-ORDER-633 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_2R_5g_ms^6 + 4C_2C_5C_LL_2L_5L_LR_5s^6 + 2C_2C_5C_LL_2L_5R_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2R_5s^5 + 4C_2C_5C_LL_2L_5R_5R_Ls^5 + 2C_2C_5L_2L_5R_2R_5g_ms^4 + 4C_2C_5C_LL_2L_5R_2R_5s^6 + 4C_2C_5C_LL_2L_5R_5s^6 + 4C_2C_5C_LL_2L_5C_2C_LL_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C$$

10.634 INVALID-ORDER-634 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

10.635 INVALID-ORDER-635 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_2R_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_2R_5s^6 + 4C_2C_5C_LL_2L_5L_LR_5R_Ls^6 + 2C_2C_5L_2L_5L_LR_2R_5g_ms^5 + 4C_2C_5L_2L_5L_LR_5s^5 + 2C_2C_5L_2L_5R_2R_5R_Lg_ms^4 + 4C_2C_5C_LL_2L_5L_LR_5R_5s^6 + 4C_2C_5C_LL_2L_5L_LR_5R_Ls^6 + 2C_2C_5L_2L_5L_LR_2R_5g_ms^5 + 4C_2C_5L_2L_5L_LR_5s^5 + 2C_2C_5L_2L_5R_5R_Lg_ms^4 + 4C_2C_5C_LL_2L_5L_LR_5R_5s^6 + 4C_2C_5C_LL_2L_5L_Rs^6 + 4C_2C_5C_LL_2L_5L_5L_2L_5L_2L_5L_2L_5L_2L_5L_2L_5L_5L_5L_5L_5L$$

10.636 INVALID-ORDER-636 
$$Z(s) = \left(\infty, \frac{L_{2s}}{C_2L_2s^2+1} + R_2, \infty, \infty, \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

10.637 INVALID-ORDER-637 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 R_2 R_5 g_m s^4 - C_2 C_5 L_2 L_5 R_2 s^4 + C_2 C_5 L_2 L_5 R_5 s^4 + C_2 L_2 L_5 R_2 g_m s^3 + C_2 L_2 R_2 g_m s^4 + C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 R_2 g_m s^3 + C_2 L_2 R_2 R_5 g_m s^4 + C_2 C_5 L_2 L_5 R_2 g_m s^4$$

**10.638** INVALID-ORDER-638 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_2R_5g_ms^4 - C_2C_5L_2L_5R_2s^4 + C_2C_5L_2L_5R_5s^4 + C_2L_2L_5R_5s^4 + C_2L_2L_5R_2s^4 + C_2C_5L_2L_5R_2s^4 + C_2C_5L_2L_5R_2s^4$$

**10.639** INVALID-ORDER-639 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{R_L}{C_LR_Ls+1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2R_Ls^5 + C_2C_5C_LL_2L_5R_5R_Ls^5 + C_2C_5L_2L_5R_2g_ms^4 + 2C_2C_5L_2L_5R_2R_Lg_ms^4 + C_2C_5L_2L_5R_2s^4 + C_2C_5L_2L_5R_5s^4 + 4C_2C_5L_2L_5R_2s^4 + C_2C_5L_2L_5R_2s^4 + C_2C_5L_2L_5R_2s^2 + C_$$

**10.640** INVALID-ORDER-640 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_5g_ms^5 + 2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + C_2C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C$$

**10.641** INVALID-ORDER-641 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + C_2C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2$$

10.642 INVALID-ORDER-642 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2R_5g_ms^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_LR_5s^6 + 2C_2C_5L_2L_5L_LR_2g_ms^5 + 4C_2C_5L_2L_5L_Ls^5 + C_2C_5L_2L_5R_2g_ms^4 + C_2C_5L_2L_5R_2s^4 + C_2C_5L_2L_5L_Rs^6 + 2C_2C_5L_2L_5L_Rs^6 + 2C_2C_5L_2L_5L_$$

10.643 INVALID-ORDER-643 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + 2C_2C_5C_LL_2L_5R_2g_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_2L_5R_2g_ms^5 + C_2C_5C_LL_2$$

10.644 INVALID-ORDER-644 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

10.645 INVALID-ORDER-645 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$$

10.646 INVALID-ORDER-646 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2+1} + R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

10.647 INVALID-ORDER-647 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 R_2 R_5 g_m s^4 - C_2 C_5 L_2 L_5 R_2 R_5 g_m s^4 - C_2 C_5 L_2 L_5 R_2 s^4 + C_2 C_5 L_2 L_5 R_5 s^4 + 4 C_2 C_5 L_2 L_5 R_L s^4 + 2 C_2 C_5 L_2 R_2 R_5 R_L g_m s^3 + C_2 C_5 L_2 R_2 R_5 R_L g_m s^4 + C_2 C_5 L_2 R_5 R_L s^3 + 4 C_2 C_5 L_2 R_5 R_L s^4 + 2 C_2 C_5 L_2 R_5 R_L g_m s^$$

10.648 INVALID-ORDER-648 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_2R_5g_ms^4 - C_2C_5L_2L_5R_2s_5g_ms^4 - C_2C_5L_2L_5R_2s_5s_5 + C_2C_5C_LL_2L_5R_2s_5s_5 + C_2C_5C_LL_2R_2R_5s_4 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s_4 + 2C_2C_5L_2R_2R_5g_ms^3 + 4C_2C_5L_2R_5s_3 + C_2C_5L_2R_5s_3 +$$

10.649 INVALID-ORDER-649 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2R_Ls^5 + C_2C_5C_LL_2L_5R_5R_Ls^5 + C_2C_5C_LL_2R_2R_5R_Ls^4 + C_2C_5L_2L_5R_2g_ms^4 + 2C_2C_5L_2L_5R_2R_Lg_ms^4 + C_2C_5L_2L_5R_2R_Lg_ms^4 + C_2C_5L_2L_5R_2R_Lg_ms^2 + C_2$$

10.650 INVALID-ORDER-650 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_5g_ms^5 + 2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5C_LL_2R_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_2R_5s^4 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_2s$$

10.651 INVALID-ORDER-651 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 2C_2C_5C_LL_2L_2L_2R_2g_ms^5 + 4C_2C_5C_LL_2L_2R_5s^5 + 2C_2C_5C_LL_2L_3R_3g_ms^5 + 4C_2C_5C_LL_2L_3R_3g_ms^5 + 4C_2C_5C_LL_3R_3g_ms^5 + 4C_2C_5C_LL_$$

10.652 INVALID-ORDER-652 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{L_Ls}{C_LL_Ls^2+1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2R_5g_ms^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_LR_5s^6 + C_2C_5C_LL_2L_LR_2s^5 + 2C_2C_5L_2L_5L_LR_2g_ms^5 + 4C_2C_5L_2L_5L_Ls^5 + C_2C_5L_2L_5R_2g_ms^4 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2s^6 + C_$$

10.653 INVALID-ORDER-653 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + 2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_2s^5$$

10.654 INVALID-ORDER-654 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2R_5R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_2R_Ls^6 + C_2C_5C_LL_2L_5L_LR_5R_Ls^6 + C_2C_5C_LL_2L_2L_2R_2R_5R_Ls^5 + C_2C_5L_2L_5L_LR_2R_5g_ms^5 + 2C_2C_5L_2L_5L_LR_2R_Lg_ms^5 + 2C_2C_5L_2L_5L_LR_2R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_2R_Lg_ms^6 + C_2C_5C_LL_2L_2L_2R_Lg_ms^6 + C_2C_5C_LL_2L_2L_2R_Lg_ms^6 + C_2C_5C_LL_2L_2R_Lg_ms^6 + C_2C_5C_LL_2R_Lg_ms^6 + C_2C_5C_LL_2R_$$

10.655 INVALID-ORDER-655 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{L_Ls}{C_LL_Ls^2+1} + R_L\right)$$

10.656 INVALID-ORDER-656 
$$Z(s) = \left(\infty, \ \frac{L_2s}{C_2L_2s^2+1} + R_2, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

10.657 INVALID-ORDER-657 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2L_2R_2R_5g_ms^2 - C_2L_2R_2s^2 + C_2L_2R_5s^2 + C_2R_2R_5s + R_2R_5g_m - R_2 + R_5}{C_2C_LL_2R_2s^3 + C_2C_LL_2R_5s^3 + C_2C_LR_2R_5s^2 + 2C_2L_2R_2g_ms^2 + 4C_2L_2s^2 + 4C_2R_2s + C_LR_2s + C$$

10.658 INVALID-ORDER-658 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{R_L}{C_L R_L s + 1}\right)$$

10.659 INVALID-ORDER-659 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \ \infty, \ \infty, \ R_5, \ R_L + \frac{1}{C_L s}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 L_2 R_2 R_5 g_m s^2 - C_2 L_2 R_2 s^2 + C_2 L_2 R_5 s^2 + C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 + R_5\right)}{C_2 C_L L_2 R_2 g_m s^3 + 2 C_2 C_L L_2 R_2 g_m s^3 + C_2 C_L L_2 R_2 s^3 + C_2 C_L L_2 R_5 s^3 + 4 C_2 C_L L_2 R_2 s^3 + C_2 C_$$

**10.660** INVALID-ORDER-660 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}L_{2}R_{5}g_{m}s^{2}-C_{2}L_{2}R_{5}s^{2}+C_{2}L_{2}R_{5}s^{2}+C_{2}R_{2}R_{5}g_{m}-R_{2}+R_{5}\right)}{2C_{2}C_{L}L_{2}L_{L}R_{2}g_{m}s^{4}+4C_{2}C_{L}L_{2}L_{5}s^{4}+C_{2}C_{L}L_{2}R_{5}g_{m}s^{3}+C_{2}C_{L}L_{2}R_{5}s^{3}+4C_{2}C_{L}L_{2}R_{5}s^{3}+4C_{2}C_{L}L_{2}R_{5}s^{3}+C_{2}C_{L}L_{2}R_{5}s^{2}+2C_{2}L_{2}R_{2}g_{m}s^{2}+4C_{2}L_{2}s^{2}+4C_{2}R_{2}s^{2}+2C_{2}L_{2}R_{2}s^{2}+C_{2}L_$$

10.661 INVALID-ORDER-661 
$$Z(s) = \left(\infty, \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \infty, \infty, R_5, \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(C_2 L_2 R_2 R_5 g_m s^2 - C_2 L_2 R_2 s^2 + C_2 L_2 R_5 s^2 + C_2 R_2 R_5 s + R_2 R_5 g_m - R_2 R_5 g_m s^2 + C_2 R_2 R_5 g_m s^2 + C_2$$

10.662 INVALID-ORDER-662 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}L_{2}R_{2}R_{5}g_{m}s^{2} - C_{2}L_{2}R_{2}s^{2} + C_{2}L_{2}R_{2}s^{2} + C_{2}L_{2}R_{2}g_{m}s^{4} + 4C_{2}C_{L}L_{2}L_{2}s^{4} + C_{2}C_{L}L_{2}R_{2}g_{m}s^{3} + 2C_{2}C_{L}L_{2}R_{2}s^{3} + C_{2}C_{L}L_{2}R_{2}s^{3} + 4C_{2}C_{L}L_{2}R_{2}s^{3} + 4C_{2}C_{L}L_{2}R_{2}s^{3} + C_{2}C_{L}L_{2}R_{2}s^{3} + C_{2$$

10.663 INVALID-ORDER-663 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_LL_2L_LR_2R_5R_Lg_ms^4 + C_2C_LL_2L_LR_2R_Ls^4 + C_2C_LL_2L_Rs_RL_s^4 + C_2C_LL_LR_2R_5R_Ls^3 + C_2L_2L_LR_2R_5g_ms^3 + 2C_2L_2L_LR_2R_Lg_ms^3 + C_2L_2L_LR_2s^3 + C_2L_2L_2L_2R_2s^3 + C_2L_2L_2L_2R_2s^3 + C_2L_2L_2L_2R_2s^3 + C_2L_2L_2R_2s^3 + C_2L_2L_2R_2s^2 + C$$

**10.664** INVALID-ORDER-664 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

10.665 INVALID-ORDER-665 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

**10.666** INVALID-ORDER-666 
$$Z(s) = \left(\infty, \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \infty, \infty, \frac{1}{C_5s}, R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_2 R_2 s - C_5 R_2 s + R_2 g_m + 1 \right)}{2 C_2 C_5 L_2 R_2 g_m s^3 + C_2 C_5 L_2 R_2 s^3 + 4 C_2 C_5 L_2 R_L s^3 + 4 C_2 C_5 R_2 R_L s^2 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_2 R_2 s + 2 C_5 R_2 R_L g_m s + C_5 R_2 s + 4 C_5 R_L s + R_2 g_m + 1}$$

10.667 INVALID-ORDER-667 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \ \infty, \ \infty, \ \frac{1}{C_5 s}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2R_2s^3 + C_2L_2R_2g_ms^2 + C_2L_2s^2 + C_2R_2s - C_5R_2s + R_2g_m + 1}{s\left(C_2C_5C_LL_2R_2s^3 + 2C_2C_5L_2R_2g_ms^2 + 4C_2C_5L_2s^2 + 4C_2C_5R_2s + C_2C_LL_2R_2g_ms^2 + C_2C_LL_2s^2 + C_2C_LR_2s + C_5C_LR_2s + 2C_5R_2g_m + 4C_5 + C_LR_2g_m + C_L\right)}$$

10.668 INVALID-ORDER-668 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_2 R_2 s - C_5 R_2 s + R_2 g_m s^2 + C_2 L_2 R_2 R_2 g_m s^2 + C$$

10.669 INVALID-ORDER-669 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(-C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_2 R_2 s - C_5 R_2 s + R_2 g_m + C_2 C_5 C_L L_2 R_2 g_m s^3 + C_2 C_5 C_L L_2 R_2 s^3 + 4 C_2 C_5 C_L L_2$$

10.670 INVALID-ORDER-670 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$$

10.671 INVALID-ORDER-671 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

$$H(s) = \frac{L_L s \left(-C_2 C_5 L_2 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_2 R_2 s - C_5 R_2 s + R_2 g_m s^2 + C_2 L_2 L_2 R_2 g_m s^2 + C_2 R_2$$

**10.672** INVALID-ORDER-672 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(-C_2 C_5 L_2 R_2 s + 2C_2 C_5 C_L L_2 R_2 s^3 + 4C_2 C_5$$

10.673 INVALID-ORDER-673 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_2R_Ls^5 + 2C_2C_5L_2L_LR_2R_Lg_ms^4 + C_2C_5L_2L_LR_2s^4 + 4C_2C_5L_2L_LR_Ls^4 + C_2C_5L_2R_2R_Ls^3 + 4C_2C_5L_LR_2s^4 + 4C_2C_5L_LR_Ls^4 + C_2C_5L_2R_Ls^3 + 4C_2C_5L_LR_2s^4 + 4C_2C_5L_LR_Ls^4 + C_2C_5L_LR_Ls^4 + C_2C_5L_LR_Ls^3 + 4C_2C_5L_LR_Ls^3 + 4C_2C_5L_LR_Ls^3$$

10.674 INVALID-ORDER-674 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_LR_2R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_LR_2R_Ls^4 + 2C_2C_5L_2L_LR_2g_ms^4 + 4C_2C_5L_2L_Ls^4 + 2C_2C_5L_2R_2R_Lg_ms^3 + C_2C_5L_2R_2R_Lg_ms^3 + C_2C_5L_2R_2R_Lg_ms^4 + C_2C_5L_2L_LR_2g_ms^4 + C_2C_5L_2L_Ls^4 + 2C_2C_5L_2L_LR_2g_ms^3 + C_2C_5L_2L_LR_2g_ms^4 + C_2C_5L_2L_2L_2R_2g_ms^4 + C_2C_5L_2L_2L_2R_2g_ms^4 + C_2C_5L_2L_2R_2g_ms^4 + C_2C_5L_2R_2g_ms^4 + C_2C_5L_2R_2g_ms^2 + C_2C_5L_2R_2g_ms^2 + C_2C_5L_2R_2g_ms^2 + C_2C_5L_2R_2g_ms^2 + C_2C_5L_2R_2$$

10.675 INVALID-ORDER-675 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

10.676 INVALID-ORDER-676 
$$Z(s) = \left(\infty, \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \infty, \infty, \infty, \frac{R_5}{C_5R_5s + 1}, R_L\right)$$

10.677 INVALID-ORDER-677 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s + 1}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{-C_2C_5L_2R_2R_5s^3 + C_2L_2R_2s_5g_ms^2 - C_2L_2R_2s^2 + C_2L_2R_5s^2 + C_2R_2R_5s - C_5R_2R_5s}{C_2C_5L_2R_2R_5s^4 + 2C_2C_5L_2R_5s^3 + 4C_2C_5L_2R_5s^3 + 4C_2C_5R_2R_5s^2 + C_2C_LL_2R_2s^3 + C_2C_LL_2R_2s^3 + C_2C_LL_2R_5s^3 + C_2C_LL_2R_5s^3 + C_2C_LL_2R_5s^3 + C_2C_LL_2R_2s^3 + C_2C_LL_2R_2s^2 + C_2C_LL_2R_2s^2 + C_2C_LL_2R_2s^2 + C_2C_LL_2R_2s^2 + C_2C_$$

10.678 INVALID-ORDER-678 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s + 1}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

10.679 INVALID-ORDER-679 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s + 1}, \ R_L + \frac{1}{C_Ls}\right)$$

10.680 INVALID-ORDER-680 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s + 1}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_LR_2R_5g_ms^5 + 4C_2C_5C_LL_2L_LR_5s^5 + C_2C_5C_LL_2R_2R_5s^4 + 4C_2C_5C_LL_2R_2R_5s^4 + 2C_2C_5L_2R_2R_5g_ms^3 + 4C_2C_5L_2R_5s^3 + 4C_2C_5R_2R_5s^2 + 2C_2C_LL_2L_2R_2g_ms^3 + 4C_2C_5L_2R_5s^3 + 4C_2C_5R_2R_5s^3 + 4C_2C_5R_5R_5s^$$

10.681 INVALID-ORDER-681 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s + 1}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

10.682 INVALID-ORDER-682 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s + 1}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{1}{2C_2C_5C_LL_2L_LR_2R_5g_ms^5 + 4C_2C_5C_LL_2L_LR_5s^5 + 2C_2C_5C_LL_2R_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_2R_5s^4 + 4C_2C_5C_LL_2R_5R_Ls^4 + 4C_2C_5C_LL_2R_2R_5s^4 + 4C_2C_5C_LL_2R_2R_5R_Ls^3 + 4C_2C_5C_LL_2R_2R_5R_Ls^4 + 4C_2C_5C_LL_2R_2R_5R_Ls$ 

10.683 INVALID-ORDER-683 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s + 1}, \ \frac{1}{C_Ls + \frac{1}{L_Ls}}\right)$$

10.684 INVALID-ORDER-684 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s + 1}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2R_5s^5 + 4C_2C_5C_LL_2L_Rs^5 + 4C_2C_5C_LL_2L_Rs^5 + 4C_2C_5C_LL_2R_2R_5R_Ls^4 + 2C_2C_5L_2L_Rs^4 + 4C_2C_5L_2L_Rs^4 + 4C_2C_5L_2L_2L_Rs^4 + 4C_2C_5L_2L_2L_$$

10.685 INVALID-ORDER-685 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5}{C_5R_5s + 1}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$\begin{aligned} \textbf{10.686} \quad \textbf{INVALID-ORDER-686} \ \ Z(s) &= \left( \infty, \ \frac{R_2 \left( L_2 s + \frac{1}{C_2 s} \right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5 s}, \ R_L \right) \\ H(s) &= \frac{R_L \left( C_2 C_5 L_2 R_2 R_5 g_m s^3 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + C_2 C_5 R_2 R_5 s^2 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_2 R_2 s + C_5 R_2 R_5 g_m s - C_5 R_2 s + C_5 R_2 R_5 g_m s^3 + C_5 R_5 R_5 g_m s^3 + C_5 R_5 R_5 g_m s^3 + C_5 R_5 g_m s^$$

10.687 INVALID-ORDER-687 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2C_5L_2R_2R_5g_ms^3 - C_2C_5L_2R_2s^3 + C_2C_5L_2R_5s^3 + C_2C_5R_2R_5s^2 + C_2L_2R_2g_ms^2 + C_2L_2s^2 + C_2R_2s + C_5R_2R_5g_ms^2 + C_2L_2R_2g_ms^2 + C_2L_2R_2$$

10.688 INVALID-ORDER-688 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 R_2 + C_2 C_5 L_2 R_2 R_5 R_L g_m s^4 + C_2 C_5 C_L L_2 R_2 R_L s^4 + C_2 C_5 C_L L_2 R_5 R_L s^4 + C_2 C_5 C_L R_2 R_5 R_L s^3 + C_2 C_5 L_2 R_2 R_5 g_m s^3 + 2 C_2 C_5 L_2 R_2 R_L g_m s^3 + C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + 4 C_2 C_5 L_2 R_2 R_5 R_L s^4 + C_2 C_5 L_2 R_2 R_$$

10.689 INVALID-ORDER-689 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_{L}R_{L}s+1\right)\left(C_{2}C_{5}L_{2}R_{2}R_{5}g_{m}s^{3}-C_{2}C_{5}L_{2}R_{2}s^{3}+C_{2}C_{5}L_{2}R_{5}s^{3}+C_{2}C_{5}R_{2}R_{2}s^{3}+C_{2}C_{5}R_{2}R_{2}s^{3}+C_{2}C_{5}R_{2}R_{2}s^{3}+C_{2}C_{5}C_{L}L_{2}R$$

10.690 INVALID-ORDER-690 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_2 R_2 R_5 g_m s^3 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + C_2 C_5 R_2 R_5 g_m s^3 - C_2 C_5 L_2 R_2 R_5 g_m s^3 + C_2 C_5 R_2 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_5 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_5 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_5 R_5 g_m s^3 + C_2 C_5 C_L L_2 R_5 R$$

10.691 INVALID-ORDER-691 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

10.692 INVALID-ORDER-692 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{\left(C_L L_L s^2 + C_L R_L s + 1\right) \left(C_2 C_5 C_L L_2 L_L R_2 R_3 s^4 + 4 C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + 2 C_2 C_5 C_L L_2 R_2 R_L g_m s^3 + C_2 C_5 C_L L_2 R_2 s^3 + C_2 C_5 C_L L_2 R_5 s^3 + 4 C_2 C_5 C_L L_2 R_L s$ 

10.693 INVALID-ORDER-693 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{L_Ls}}\right)$$

 $H(s) = \frac{1}{C_2C_5C_LL_2L_LR_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2R_Ls^5 + C_2C_5C_LL_2L_Rs_Rl_Ls^5 + C_2C_5C_LL_LR_2R_5R_Ls^4 + C_2C_5L_2L_LR_2R_5g_ms^4 + 2C_2C_5L_2L_LR_2R_Lg_ms^4 + C_2C_5L_2L_LR_2R_Lg_ms^4 + C_2C_5L_2L_LR_2R_2R_2R_2R_2$ 

**10.694** INVALID-ORDER-694 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_2R_5g_ms^5 + 2C_2C_5C_LL_2L_LR_2R_Lg_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_LR_5s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2R_2s^5 + 4C_2C_5C$$

10.695 INVALID-ORDER-695 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_LR_2R_5g_ms^5 + 2C_2C_5C_LL_2L_LR_2g_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_LR_5s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2R_2s^5 + 4C_2C_5C_LL_2R_2s^$$

10.696 INVALID-ORDER-696 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_5 R_2 s^3 + C_2 L_2 R_2 g_m s^2 + C_2 L_2 s^2 + C_2 R_2 s + C_5 L_5 R_2 g_m s^2 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 R_2 g_m s^2 + C_5 L_5 R_2 g_m s^3 + C_2 C_5 L_2 R_2 g_m s^3 + C_$$

10.697 INVALID-ORDER-697 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_2g_ms^4 + C_2C_5L_2L_5s^4 - C_2C_5L_2R_2s^3 + C_2C_5L_2R_2s^3 + C_2L_2R_2g_ms^2 + C_2L_2s^2 + C_2R_2s + C_5L_5R_2g_ms^2 + C_2C_5L_2R_2s^3 + C_2C_5L_2R_2s^3 + C_2C_5L_2R_2g_ms^2 + C_2C_5L_2R_2g_m$$

10.698 INVALID-ORDER-698 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

10.699 INVALID-ORDER-699 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_4 R_2 s^3 + C_2 C_5 C_L L_2 R_2 s^3 + C_2$$

10.700 INVALID-ORDER-700 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_{L}L_{L}s^{2}+1\right)\left(C_{2}C_{5}L_{2}L_{5}R_{2}g_{m}s^{4}+C_{2}C_{5}L_{2}L_{5}s^{4}-C_{2}C_{5}L_{2}R_{2}s^{3}+C_{2}C_{5}L_{2}L_{5}s^{4}-C_{2}C_{5}L_{2}L_{2}S^{3}+C_{2}C_{5}L_{2}L_{2}S^{4}+C_{2}C_{5}C_{L}L_{2}L_{2}S^{4}+C_{2}C_{5}C_{L}L_{2}L_{2}S^{4}+C_{2}C_{5}C_{L}L_{2}L_{2}S^{4}+C_{2}C_{5}C_{L}L_{2}L_{2}S^{4}+C_{2}C_{5}C_{L}L_{2}L_{2}S^{3}+C_{2}C_{5}L_{2}L_{2}S^{3}+C$$

10.701 INVALID-ORDER-701 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

10.702 INVALID-ORDER-702 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{\left(C_{L}L_{L}s^{2} + C_{L}R_{L}s + 1\right)\left(C_{2}C_{5}C_{L}L_{2}L_{5}s^{2} + C_{L}C_{5}C_{L}L_{2}L_{L}R_{2}g_{m}s^{4} + 4C_{2}C_{5}C_{L}L_{2}L_{L}s^{4} + 2C_{2}C_{5}C_{L}L_{2}R_{L}g_{m}s^{3} + C_{2}C_{5}C_{L}L_{2}R_{2}s^{3} + 4C_{2}C_{5}C_{L}L_{2}R_{L}s^{3} + C_{2}C_{5}C_{L}L_{2}R_{L}s^{3} + C_{2}C_{5}C_{L}L_{2}R_{L}s^{3}$ 

10.703 INVALID-ORDER-703 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

10.704 INVALID-ORDER-704 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + 2C_2C_5C_LL_2L_LR_2g_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_2L_2L_2s^5 + 4C_2C_5C_LL_2L_2L_2s^5 + 4C_2C_5C_LL_2L_2L_2s^5 + 4C_2C_5C_LL_2L_2L_2s^5 + 4C_2C_5C_LL_2L_2L_2s^5 + 4C_2C_5C_LL_2L_2L_2s^5 + 4C_2C_5C_LL_2L_2c^5 + 4C_2C_5C_LL_2c^5 + 4C_2C_5C_LL_$$

10.705 INVALID-ORDER-705 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5C_LL_2L_LR_2g_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_LR_2s^5 + 4C_2C_5C_LL_2L_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2L_2R_2s^5 + 4C_2C_5C_LL_2L_2R_2s^5 + 4C_2C_5C_LL_2R_2s^5 + 4C_2C_5C_LL$$

**10.706** INVALID-ORDER-706 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( -C_2 C_5 L_2 L_5 R_2 s^4 + C_2 L_2 L_5 R_2 g_m s^3 + C_2 L_2 L_5 s^3 - C_2 L_2 R_2 s^2 + C_2 L_5 R_2 s^2 - C_5 L_5 R_2 R_2 r_2 L_5 R_2 r_3 + C_2 L_2 R_2 r_3 +$$

10.707 INVALID-ORDER-707 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1}, \ \frac{1}{C_L s}\right)$$

$$H(s) = \frac{-C_2C_5L_2L_5R_2s^4 + C_2L_2L_5R_2g_ms^3 + C_2L_2L_5s^3 - C_2L_2R_2s^2 + C_2L_5R_2s^2 - C_5L_5R_2s^2}{C_2C_5C_LL_2L_5R_2s^5 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + 4C_2C_5L_5R_2s^3 + C_2C_LL_2L_5R_2g_ms^4 + C_2C_LL_2L_5s^4 + C_2C_LL_2R_2s^3 + C_2C_LL_5R_2s^3 + 2C_2L_2R_2g_ms^2 + 4C_2L_2R_2g_ms^2 + 4$$

10.708 INVALID-ORDER-708 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

$$H(s) = \frac{R_L}{C_2C_5C_LL_2L_5R_2R_Ls^5 + 2C_2C_5L_2L_5R_2R_Lg_ms^4 + C_2C_5L_2L_5R_2s^4 + 4C_2C_5L_2L_5R_Ls^4 + 4C_2C_5L_5R_2R_Ls^3 + C_2C_LL_2L_5R_2R_Lg_ms^4 + C_2C_LL_2L_5R_Ls^4 + C_2C_LL_2R_2R_Ls^3 + C_2C_LL_2R_2R_$$

10.709 INVALID-ORDER-709 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + 4C_2C_5C_LL_5R_2R_Ls^4 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + 4C_2C_5L_5L_5R_2s^3 + C_2C_LL_2L_5R_2g_ms^4 + 4C_2C_5L_5R_2g_ms^4 + 4C_2C_5L_5R_2s^3 + C_2C_LL_2L_5R_2g_ms^4 + 4C_2C_5L_5R_2g_ms^4 + 4C_2C_5L_5R_2s^3 + C_2C_LL_2L_5R_2g_ms^4 + 4C_2C_5L_5R_2g_ms^4 + 4C_2C_5R_2g_ms^4 + 4C_2C_5R_2g_ms^2 + 4C_2C_5R_2g_ms^2 + 4C_2C_5R_2g_ms^2 + 4C_2C_5R_2g_ms^2 + 4C_2C_5R_2g_ms^2 + 4C_2C_$$

10.710 INVALID-ORDER-710 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_5L_LR_2s^5 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + 4C_2C_5L_5L_2s^3 + C_2C_LL_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + 4C_2C_5L_2L_5R_2s^3 + C_2C_LL_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5R_2s^3 + C_2C_LL_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5R_2s^3 + C_2C_LL_2L_5R_2s^3 + C_2C_LL_2L_2R_2s^3 + C_2C_LL_2L_2R_2s^3 + C_2C_LL_2R_2s^3 + C_2C_LL_2R_2s^2 + C_2$$

10.711 INVALID-ORDER-711 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

 $H(s) = \frac{L_L s}{C_2 C_5 C_L L_2 L_5 L_L R_2 s^6 + 2 C_2 C_5 L_2 L_5 L_L R_2 g_m s^5 + 4 C_2 C_5 L_2 L_5 L_L s^5 + C_2 C_5 L_2 L_5 R_2 s^4 + 4 C_2 C_5 L_5 L_L R_2 s^4 + C_2 C_L L_2 L_5 L_L R_2 g_m s^5 + C_2 C_L L_2 L_5 L_L R_2 s^4 + C_2 C_L L_2$ 

10.712 INVALID-ORDER-712 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + 2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + 4C_2C_5C_LL_5L_LR_2s^5 + 4C_2C_5C_LL_5L_LR_2s^5 + 4C_2C_5C_LL_5R_2R_Ls^4 + 2C_2C_5C_LL_5R_2R_Ls^4 + 2C_2C_5C_LL_5R_2R_Ls^2 + 2C_2C_5C_LL_5R_2R_Ls^$ 

10.713 INVALID-ORDER-713 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ \frac{1}{C_Ls + \frac{1}{L_Ls}}\right)$$

10.714 INVALID-ORDER-714 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2R_Lg_ms^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + 4C_2C_5C_LL_2L_5L_LR_Ls^6 + 4C_2C_5C_LL_5L_LR_2R_Ls^5 + 2C_2C_5L_2L_5L_LR_2g_ms^5 + 4C_2C_5L_2L_5L_Ls^5 + 2C_2C_5L_2L_5L_LR_2s^6 + 4C_2C_5C_LL_5L_LR_2s^6 + 4C_2C_5C_LL_5L_2s^6 + 4C_2C_5$$

10.715 INVALID-ORDER-715 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

10.716 INVALID-ORDER-716 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ R_L\right)$$

$$H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 + C_2 C_5 L_2 R_2 R_5 g_m s^3 - C_2 C_5 L_2 R_2 s^3 + C_2 C_5 L_2 R_5 s^3 + C_2 C_5 L_5 R_2 s^3 + C_2 C_5 R_2 R_5 s^2 + C_2 L_5 R_2 R_5 s^3 + C_2 C_5 L_2 R_2 R_5 g_m s^3 + C_2 C_5 L_2 R_2 R_5 g_m s^3 + C_2 C_5 L_2 R_2 R_5 g_m s^3 + C_2 C_5 L_2 R_2 R_5 s^3 + C_2 C_5 L_2 R_2 R_5 s^3 + C_2 C_5 L_2 R_2 R_5 g_m s^3 + C_2 C_5 L_2 R_5 g_m s^3 + C_2 C_$$

10.717 INVALID-ORDER-717 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_2g_ms^4 + C_2C_5L_2L_5s^4 + C_2C_5L_2R_2g_ms^3 - C_2C_5L_2R_2s^3 + C_2C_5L_2R_5s^3 + C_2C_5L_2R_2s^3 + C_2C_5L_2R$$

10.718 INVALID-ORDER-718 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_2R_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_2R_Ls^4 + C_2C_5C_LL_2R_5R_Ls^4 + C_2C_5C_LL_5R_2R_Ls^4 + C_2C$$

10.719 INVALID-ORDER-719 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L R_L s + 1\right) \left(C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 + C_2 C_5 L_2 R_2 R_5 g_m s^4 + C_2 C_5 L_2 L_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^3 + 2 C_2 C_5 C_L L_2 R_2 R_2 R_2 g_m s^3 + C_2 C_5 C_L L_2 R_2 S^3 + C_2 C_5 C_L L_2 R_5 s^3 + 4 C_2 C_5 C_L L_2 R_2 S^3 + C_2 C_5$$

10.720 INVALID-ORDER-720 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{\left(C_L L_L s^2 + 1\right) \left(C_2 C_5 L_2 L_5 R_2 g_m s^4 + C_2 C_5 L_2 L_5 s^4 + C_2 C_5 L_2 R_2 R_5 g_m s^4 + C_2 C_5 L_2 L_5 s^4 + C_2 C_5 L_2 L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 L_2 L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_2 R_5 g_m s^4 + C_2 C_5 C_L L_2 R_5 R_5 g_m$$

10.721 INVALID-ORDER-721 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_Ls^6 + C_2C_5C_LL_2L_LR_2g_ss^5 + C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_2L_2s^5 + C_2C_5C_LL_2L_2L_2s^5 + C_2C_5C_LL_2L_2s^5 + C_2C_5C_LL_2L_2s^5 + C_2C_5C_LL_2s^5 + C_2C_5C_LL_2s^5$$

10.722 INVALID-ORDER-722 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{\left(C_{L}L_{s}^{2} + C_{L}R_{L}s + 1\right)^{2}}{s\left(C_{2}C_{5}C_{L}L_{2}L_{5}R_{2}g_{m}s^{4} + C_{2}C_{5}C_{L}L_{2}L_{L}R_{2}g_{m}s^{4} + 4C_{2}C_{5}C_{L}L_{2}L_{L}s^{4} + C_{2}C_{5}C_{L}L_{2}R_{2}R_{5}g_{m}s^{3} + 2C_{2}C_{5}C_{L}L_{2}R_{2}R_{2}g_{m}s^{3} + C_{2}C_{5}C_{L}L_{2}R_{2}s^{3} + C$ 

10.723 INVALID-ORDER-723 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{1}{C_Ls + \frac{1}{L_Ls}}\right)$$

10.724 INVALID-ORDER-724 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_Ls^6 + C_2C_5C_LL_2L_LR_2g_ms^5 + 2C_2C_5C_LL_2L_LR_2g_ms^5 + C_2C_5C_LL_2L_LR_2s^5 + C_2C_5C_LL_2L_2L_2s^5 + C_2C_5C_LL_2L_2s^5 + C_2C_5C_LL_2L_2s^5 + C_2C_5C_LL_2L_2s^5 + C_2C_5C_LL_2s^5 + C_2$$

10.725 INVALID-ORDER-725 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ L_5s + R_5 + \frac{1}{C_5s}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_2L_LR_2g_ms^5 + C_2C_5C_LL_2L_2L_2R_2g_ms^5 + C_2C_5C_LL_2L_2R_2g_ms^5 + C_2C_5C_LL_2R_2g_ms^5 + C_2C_5C_LR_2R_2g_ms^5 + C_2C_5C_LR_2g_ms^5 + C_2C_5C_LR_2g$$

10.726 INVALID-ORDER-726 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ R_L\right)$$

10.727 INVALID-ORDER-727 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{-C_2C_5L_2L_5R_2R_5s^4 + C_2L_2L_5R_2R_5s^4 + C_2L_2L_5R_5R_5s^4 + C_2L_2L_5R_5R_5$ 

10.728 INVALID-ORDER-728 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

10.729 INVALID-ORDER-729 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ R_L + \frac{1}{C_Ls}\right)$$

 $H(s) = -\frac{1}{2C_2C_5C_LL_2L_5R_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2R_5s^5 + 4C_2C_5C_LL_2L_5R_5R_Ls^5 + 4C_2C_5C_LL_5R_2R_5R_Ls^4 + 2C_2C_5L_2L_5R_2R_5g_ms^4 + 4C_2C_5L_2L_5R_5s^4 + 4C_2C_5L_5R_2R_5s^3 + 4C_2C_5C_LL_5R_2R_5R_Ls^4 + 4C_2C_5L_5R_2R_5R_Ls^4 + 4C_2C_5R_Ls^4 + 4C$ 

10.730 INVALID-ORDER-730 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ L_Ls + \frac{1}{C_Ls}\right)$$

 $H(s) = -\frac{1}{2C_{2}C_{5}C_{L}L_{2}L_{5}L_{L}R_{2}R_{5}g_{m}s^{6} + 4C_{2}C_{5}C_{L}L_{2}L_{5}L_{L}R_{5}s^{6} + C_{2}C_{5}C_{L}L_{2}L_{5}R_{2}R_{5}s^{5} + 4C_{2}C_{5}C_{L}L_{5}L_{L}R_{2}R_{5}s^{5} + 2C_{2}C_{5}L_{2}L_{5}R_{2}R_{5}g_{m}s^{4} + 4C_{2}C_{5}L_{2}L_{5}R_{5}s^{4} + 4C_{2}C_{5}L_{5}R_{2}R_{5}s^{3}}{C_{2}C_{5}C_{L}L_{2}L_{5}L_{L}R_{2}R_{5}s^{6} + 4C_{2}C_{5}C_{L}L_{2}L_{5}R_{2}R_{5}s^{5} + 4C_{2}C_{5}C_{L}L_{5}L_{L}R_{2}R_{5}s^{5} + 2C_{2}C_{5}L_{2}L_{5}R_{2}R_{5}g_{m}s^{4} + 4C_{2}C_{5}L_{2}L_{5}R_{5}s^{4} + 4C_{2}C_{5}L_{5}R_{2}R_{5}s^{3}$ 

10.731 INVALID-ORDER-731 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2R_5s^6 + 2C_2C_5L_2L_5L_LR_2R_5g_ms^5 + 4C_2C_5L_2L_5L_LR_5s^5 + C_2C_5L_2L_5R_2R_5s^4 + 4C_2C_5L_5L_LR_2R_5s^4 + C_2C_LL_2L_5L_LR_2R_5g_ms^5 + C_2C_LL_2L_5L_LR_2s^5 + C_2C_3L_3L_3R_3s^4 + C_3C_3L_3L_3R_3s^4 + C_3C_3L_3R_3s^4 + C_3C_3L_3R_3s^2 + C_3C_3R_3s^2 + C_3C$$

10.732 INVALID-ORDER-732 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = -\frac{1}{2C_2C_5C_LL_2L_5L_LR_2R_5g_ms^6 + 4C_2C_5C_LL_2L_5L_RS^6 + 2C_2C_5C_LL_2L_5R_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2R_5s^5 + 4C_2C_5C_LL_2L_5R_5R_Ls^5 + 4C_2C_5C_LL_5L_LR_2R_5s^5 + 4C_2C_5C_LL_5L_5R_2R_5s^5 + 4C_2C_5C_LL_5L_5R_5s^5 + 4C_2C_5C_LL_5L_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_LL_5C_5C_$$

10.733 INVALID-ORDER-733 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{1}{C_Ls + \frac{1}{L_Ls}}\right)$$

10.734 INVALID-ORDER-734 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

10.735 INVALID-ORDER-735 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{1}{C_5s + \frac{1}{R_5} + \frac{1}{L_5s}}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

10.736 INVALID-ORDER-736 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ R_L\right)$$

10.737 INVALID-ORDER-737 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{C_2C_5L_2L_5R_2S_gms^4 - C_2C_5L_2L_5R_2s^4 + C_2C_5L_2L_5R_5s^4 + C_2C_5L_5L_5R_5s^4 + C_2C_5L_5R_5s^4 + C_2$$

10.738 INVALID-ORDER-738 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2R_Ls^5 + C_2C_5C_LL_2L_5R_5R_Ls^5 + C_2C_5C_LL_5R_2R_5R_Ls^4 + C_2C_5L_2L_5R_2g_ms^4 + 2C_2C_5L_2L_5R_2R_Lg_ms^4 + C_2C_5L_2L_5R_2g_ms^4 + C_2C_5L_2L_5R_2g_ms^2 + C_2C_5L_2L_5R_2g_m$$

10.739 INVALID-ORDER-739 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_5g_ms^5 + 2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + C_2C_5C_LL_5R_2s^5 + 4C_2C_5C_LL_5R_2s^5 + 4C_2C_5$$

10.740 INVALID-ORDER-740 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_5L_LR_2s^5 + C_2C_5C_LL_5R_2s^5 + 4C_2C_5C_LL_5L_5R_2s^5 + 4C_2C_5C_LL_5R_2s^5 + 4C_2$$

10.741 INVALID-ORDER-741 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2R_5g_ms^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_LR_5s^6 + C_2C_5C_LL_5L_LR_2R_5s^5 + 2C_2C_5L_2L_5L_LR_2g_ms^5 + 4C_2C_5L_2L_5L_Ls^5 + C_2C_5L_2L_5R_2R_5g_ms^4 + C_2C_5C_LL_5L_LR_2s^6 + C_2C_5C_LL_5L_LR_2s^6 + C_2C_5C_LL_5L_LR_2s^6 + C_2C_5C_LL_5L_LR_2s^6 + C_2C_5C_LL_5L_LR_2s^6 + C_2C_5C_LL_5L_Rs^6 + C_2C_5C_LL_$$

10.742 INVALID-ORDER-742 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + 2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_2L_5R_Ls^5}{2C_2C_5C_LL_2L_5L_5R_2g_ms^5 + 2C_2C_5C_LL_2L_5R_2g_ms^5 + 2C_2C_5C_LL_2L_5R_2g_ms$$

10.743 INVALID-ORDER-743 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ \frac{1}{C_Ls + \frac{1}{R_L} + \frac{1}{L_Ls}}\right)$$

10.744 INVALID-ORDER-744 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2 s + \frac{1}{C_2 s}\right)}{L_2 s + R_2 + \frac{1}{C_2 s}}, \ \infty, \ \infty, \ \frac{L_5 s}{C_5 L_5 s^2 + 1} + R_5, \ \frac{L_L s}{C_L L_L s^2 + 1} + R_L\right)$$

10.745 INVALID-ORDER-745 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{L_5s}{C_5L_5s^2 + 1} + R_5, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

10.746 INVALID-ORDER-746 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ R_L\right)$$

 $H(s) = \frac{R_L \left( C_2 C_5 L_2 L_5 R_2 R_5 g_m s^4 - C_2 C_5 L_2 L_5 R_2 R_5 g_m s^4 - C_2 C_5 L_2 L_5 R_2 s^4 - C_2 C_5 L_2 L_5 R_2 s^4 + C_2 C_5 L_$ 

10.747 INVALID-ORDER-747 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{1}{C_Ls}\right)$$

 $H(s) = \frac{C_2C_5L_2L_5R_2R_5g_ms^4 - C_2C_5L_2L_5}{C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + C_2C_5C_LL_2R_2R_5s^4 + C_2C_5C_LL_5R_2R_5s^4 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + 2C_2C_5L_2L_5R_2g_ms^4 + 4C_2C_5L_2L_5s^4 + 2C_2C_5L_2L_5s^4 + 2C_2C_5L_2L_5s^2 + 2C_5C_5L_2L_5s^2 + 2C_5C_5L_5c^2 + 2C_5C_5$ 

10.748 INVALID-ORDER-748 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{R_L}{C_LR_Ls + 1}\right)$$

 $H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_5R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2R_Ls^5 + C_2C_5C_LL_2L_5R_5R_Ls^5 + C_2C_5C_LL_2R_2R_5R_Ls^4 + C_2C_5C_LL_5R_2R_5R_Ls^4 + C_2C_5L_2L_5R_2R_5g_ms^4 + 2C_2C_5L_2L_5R_2R_Ls^4 + C_2C_5C_LL_5R_2R_5R_Ls^4 + C_2C_5C_LL_5R_5R_Ls^4 + C_2C_5C_LL_5R_2R_5R_Ls^4 + C_2C_5C_LL_5R_5R_Ls^4 + C_2C_5C_LL_5$ 

10.749 INVALID-ORDER-749 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5R_2R_5g_ms^5 + 2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 4C_2C_5C_LL_2L_5R_Ls^5 + 2C_2C_5C_LL_2R_2R_5R_Lg_ms^4 + C_2C_5C_LL_2R_2R_5s^4 + C_2C_5C_LL_2R_2R_5s^5 + C_2C_5C_LL_2R_5s^5 + C_2C$$

10.750 INVALID-ORDER-750 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_5s^5 + 2C_2C_5C_LL_2L_2L_2R_2g_ms^5 + 4C_2C_5C_LL_2L_2R_5s^5 + 2C_2C_5C_LL_2L_5R_5s^5 + 2C_2C_5C_LL_2L_3R_3g_ms^5 + 4C_2C_5C_LL_2L_3R_3g_ms^5 + 4C_2C_5C_LL_3R_3g_ms^5 + 4C_2C_5C_LR_3R_3g_ms^5 + 4C_2C_5C_LR_3R_$$

10.751 INVALID-ORDER-751 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{L_Ls}{C_LL_Ls^2 + 1}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2R_5g_ms^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2s^6 + C_2C_5C$$

10.752 INVALID-ORDER-752 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ L_Ls + R_L + \frac{1}{C_Ls}\right)$$

$$H(s) = \frac{1}{2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + 4C_2C_5C_LL_2L_5L_Ls^6 + C_2C_5C_LL_2L_5R_2g_ms^5 + 2C_2C_5C_LL_2L_5R_2R_Lg_ms^5 + C_2C_5C_LL_2L_5R_2s^5 + C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_5R_2s^5 + 4C_2C_5C_LL_2L_2C_5C_LL_2L_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C_LL_2C_5C_L$$

10.753 INVALID-ORDER-753 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{1}{C_Ls + \frac{1}{L_Ls}}\right)$$

10.754 INVALID-ORDER-754 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{L_Ls}{C_LL_Ls^2 + 1} + R_L\right)$$

10.755 INVALID-ORDER-755 
$$Z(s) = \left(\infty, \ \frac{R_2\left(L_2s + \frac{1}{C_2s}\right)}{L_2s + R_2 + \frac{1}{C_2s}}, \ \infty, \ \infty, \ \frac{R_5\left(L_5s + \frac{1}{C_5s}\right)}{L_5s + R_5 + \frac{1}{C_5s}}, \ \frac{R_L\left(L_Ls + \frac{1}{C_Ls}\right)}{L_Ls + R_L + \frac{1}{C_Ls}}\right)$$

$$H(s) = \frac{1}{C_2C_5C_LL_2L_5L_LR_2R_5g_ms^6 + 2C_2C_5C_LL_2L_5L_LR_2g_ms^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_LR_5s^6 + 4C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_LR_2s^6 + C_2C_5C_LL_2L_5L_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_2s^6 + C_2C_5C_LL_2L_5L_3L_3L_3L_3c^6 + C_2C_5C_LL_2L_5L_3L_3L_3c^6 + C_2C_5C_LL_2L_5L_3L_3c^6 + C_2C_5C_LL_2L_5L_3L_3c^6 + C_2C_5C_LL_3L_3c^6 + C_2C_5C_LL_3c^6 + C_2C_5C_LL_3c^$$