$$
\begin{aligned}
\frac{\mathrm{d}c_1}{\mathrm{d}t} &= -\left(6.48\mathtt{P}+7.87\max\{\mathtt{0},\cos(\mathtt{S})\}+1.86\exp\left(\frac{1}{\mathtt{T}}\right)+1.84\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_1+(0.89\mathtt{P}+0.62\max\{\mathtt{0},\cos(\mathtt{S})\})c_2\\
&+\left(1.56\mathtt{P}+8.51\max\{\mathtt{0},\cos(\mathtt{S})\}+6.50\exp\left(\frac{1}{\mathtt{T}}\right)+6.52\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_5+0.68\max\{\mathtt{0},\cos(\mathtt{S})\}c_4\\
&-\left(0.80\exp\left(\frac{1}{\mathtt{T}}\right)+0.75\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_1-9.84c_1^2\mathtt{P}c_2-\left(19.10\mathtt{P}+2.44\exp\left(\frac{1}{\mathtt{T}}\right)+2.36\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_1c_2c_3\\
&-8.21\mathtt{P}c_1c_2c_3-9.16\mathtt{P}c_1c_2c_6-0.34\mathtt{P}c_1c_4c_6-1.10\max\{\mathtt{0},\cos(\mathtt{S})\}c_1c_2c_6+29.04\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_3c_6\\
&-\frac{1}{2}c_1^3\left(1.32\exp\left(\frac{1}{\mathtt{T}}\right)+1.23\exp\left(-\frac{1}{\mathtt{T}}\right)\right)+E_1\\
\frac{\mathrm{d}c_2}{\mathrm{d}t} &= -(0.38\mathtt{P}+1.52\max\{\mathtt{0},\cos(\mathtt{S})\})c_2-(0.89\mathtt{P}+0.62\max\{\mathtt{0},\cos(\mathtt{S})\})c_2-5.57\mathtt{P}c_2-0.79\max\{\mathtt{0},\cos(\mathtt{S})\}c_2\\
&-(0.46\mathtt{P}+8.22\max\{\mathtt{0},\cos(\mathtt{S})\})c_2c_3-0.03\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_3-2.05\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_4\\
&-10.58\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_6-4.92c_1^2\mathtt{P}c_2-\left(19.10\mathtt{P}+2.44\exp\left(\frac{1}{\mathtt{T}}\right)+2.36\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_1c_2c_3\\
&-8.21\mathtt{P}c_1c_2c_3-9.16\mathtt{P}c_1c_2c_6-4.34c_2^2\mathtt{P}c_3-10.10\mathtt{P}c_2c_3c_5-\left(17.93\mathtt{P}+2.71\exp\left(\frac{1}{\mathtt{T}}\right)+2.64\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_2c_3c_5\\
&-(9.83\mathtt{P}+12.28\max\{\mathtt{0},\cos(\mathtt{S})\})c_2c_4c_6-1.10\max\{\mathtt{0},\cos(\mathtt{S})\}c_1c_2c_6\\
&-57.00\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_3c_6-2.26\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_5c_6+E_2\\
\frac{\mathrm{d}c_3}{\mathrm{d}t} &= \left(0.95\exp\left(\frac{1}{\mathtt{T}}\right)+1.15\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_4-(0.46\mathtt{P}+8.22\max\{\mathtt{0},\cos(\mathtt{S})\})c_2c_3-0.03\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_3\\
&+2.05\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_4-\left(19.10\mathtt{P}+2.44\exp\left(\frac{1}{\mathtt{T}}\right)+2.36\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_1c_2c_3-8.21\mathtt{P}c_1c_2c_3\\
&+0.34\mathtt{P}c_1c_4c_6-2.17c_2^2\mathtt{P}c_3-10.10\mathtt{P}c_2c_3c_5-\left(17.93\mathtt{P}+2.71\exp\left(\frac{1}{\mathtt{T}}\right)+2.64\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_2c_3c_5\\
&+(9.83\mathtt{P}+12.28\max\{\mathtt{0},\cos(\mathtt{S})\})c_2c_4c_6-57.00\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_3c_6-0.08c_3^3\max\{\mathtt{0},\cos(\mathtt{S})\}+E_3\\
\frac{\mathrm{d}c_4}{\mathrm{d}t} &= 1.28\mathtt{P}c_2-0.68\max\{\mathtt{0},\cos(\mathtt{S})\}c_4+1.97\max\{\mathtt{0},\cos(\mathtt{S})\}c_5+0.60\max\{\mathtt{0},\cos(\mathtt{S})\}c_6\\
&-\left(1.44\exp\left(\frac{1}{\mathtt{T}}\right)+1.36\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_4-\left(0.95\exp\left(\frac{1}{\mathtt{T}}\right)+1.15\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_4\\
&+(0.46\mathtt{P}+8.22\max\{\mathtt{0},\cos(\mathtt{S})\})c_2c_3-2.05\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_4+10.58\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_6\\
&+0.61c_1^2\mathtt{P}c_2+\left(19.10\mathtt{P}+2.44\exp\left(\frac{1}{\mathtt{T}}\right)+2.36\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_1c_2c_3-0.34\mathtt{P}c_1c_4c_6+2.17c_2^2\mathtt{P}c_3\\
&+\left(17.93\mathtt{P}+2.71\exp\left(\frac{1}{\mathtt{T}}\right)+2.64\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_2c_3c_5-(9.83\mathtt{P}+12.28\max\{\mathtt{0},\cos(\mathtt{S})\})c_2c_4c_6\\
&+1.10\max\{\mathtt{0},\cos(\mathtt{S})\}c_1c_2c_6+27.95\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_3c_6+2.26\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_5c_6+E_4\\
\frac{\mathrm{d}c_5}{\mathrm{d}t} &= \left(6.48\mathtt{P}+7.87\max\{\mathtt{0},\cos(\mathtt{S})\}+1.86\exp\left(\frac{1}{\mathtt{T}}\right)+1.84\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_1+(0.38\mathtt{P}+1.52\max\{\mathtt{0},\cos(\mathtt{S})\})c_2\\
&-\left(1.56\mathtt{P}+8.51\max\{\mathtt{0},\cos(\mathtt{S})\}+6.50\exp\left(\frac{1}{\mathtt{T}}\right)+6.52\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_5-1.97\max\{\mathtt{0},\cos(\mathtt{S})\}c_5\\
&+\left(1.44\exp\left(\frac{1}{\mathtt{T}}\right)+1.36\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_4-\left(0.46\exp\left(\frac{1}{\mathtt{T}}\right)+0.40\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_5+2.05c_1^2\mathtt{P}c_2+9.16\mathtt{P}c_1c_2c_6\\
&-10.10\mathtt{P}c_2c_3c_5-\left(17.93\mathtt{P}+2.71\exp\left(\frac{1}{\mathtt{T}}\right)+2.64\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_2c_3c_5-2.26\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_5c_6+E_5\\
\frac{\mathrm{d}c_6}{\mathrm{d}t} &= 0.79\max\{\mathtt{0},\cos(\mathtt{S})\}c_2-0.60\max\{\mathtt{0},\cos(\mathtt{S})\}c_6+\left(0.80\exp\left(\frac{1}{\mathtt{T}}\right)+0.75\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_1\\
&+\left(0.46\exp\left(\frac{1}{\mathtt{T}}\right)+0.40\exp\left(-\frac{1}{\mathtt{T}}\right)\right)c_5+0.03\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_3-10.58\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_6\\
&+2.26c_1^2\mathtt{P}c_2+8.21\mathtt{P}c_1c_2c_3-9.16\mathtt{P}c_1c_2c_6-0.34\mathtt{P}c_1c_4c_6+10.10\mathtt{P}c_2c_3c_5-(9.83\mathtt{P}+12.28\max\{\mathtt{0},\cos(\mathtt{S})\})c_2c_4c_6\\
&-1.10\max\{\mathtt{0},\cos(\mathtt{S})\}c_1c_2c_6-57.00\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_3c_6-2.26\max\{\mathtt{0},\cos(\mathtt{S})\}c_2c_5c_6\\
&+0.03c_3^3\max\{\mathtt{0},\cos(\mathtt{S})\}+\frac{1}{6}c_1^3\left(1.32\exp\left(\frac{1}{\mathtt{T}}\right)+1.23\exp\left(-\frac{1}{\mathtt{T}}\right)\right)+E_6
\end{aligned}
$$