1.
$$\mathcal{L}\{te^{10t}\}$$
 2. $\mathcal{L}\{te^{-6t}\}$

2.
$$\mathcal{L}\{te^{-6t}\}$$

3.
$$\mathcal{L}\{t^3e^{-2t}\}$$

3.
$$\mathcal{L}\{t^3e^{-2t}\}$$
 4. $\mathcal{L}\{t^{10}e^{-7t}\}$

5.
$$\mathcal{L}\{t(e^t + e^{2t})^2\}$$

5.
$$\mathcal{L}\{t(e^t + e^{2t})^2\}$$
 6. $\mathcal{L}\{e^{2t}(t-1)^2\}$

7.
$$\mathcal{L}\lbrace e^t \sin 3t \rbrace$$

7.
$$\mathcal{L}\{e^t \sin 3t\}$$
 8. $\mathcal{L}\{e^{-2t} \cos 4t\}$

9.
$$\mathcal{L}\{(1-e^t+3e^{-4t})\cos 5t\}$$

11.
$$\mathcal{L}^{-1}\left\{\frac{1}{(s+2)^3}\right\}$$
 12. $\mathcal{L}^{-1}\left\{\frac{1}{(s-1)^4}\right\}$

12.
$$\mathcal{L}^{-1}\left\{\frac{1}{(s-1)^4}\right\}$$

13.
$$\mathcal{L}^{-1}\left\{\frac{1}{s^2-6s+10}\right\}$$
 14. $\mathcal{L}^{-1}\left\{\frac{1}{s^2+2s+5}\right\}$

14.
$$\mathscr{L}^{-1}\left\{\frac{1}{s^2+2s+5}\right\}$$

15.
$$\mathcal{L}^{-1}\left\{\frac{s}{s^2+4s+5}\right\}$$
 16. $\mathcal{L}^{-1}\left\{\frac{2s+5}{s^2+6s+34}\right\}$

16.
$$\mathscr{L}^{-1}\left\{\frac{2s+5}{s^2+6s+34}\right\}$$