

Indian Institute of Technology, Delhi
ELL112/EEL 202: Circuit Theory
Tutorial 11, November 10, 2014

Synthesize the following $Z(s)$.

1.

$$\frac{s^4 + 2s^3 + 3s^2 + 5s + 1}{s^4 + s^3 + 5s^2 + s + 4}$$

2.

$$\frac{36s^4 + 45s^3 + 39s^2 + 12s + 3}{16s^4 + 36s^3 + 25s^2 + 9s + 1}$$

3.

$$\frac{2s^2 + 2s + 1}{2s^3 + 2s^2 + 2s + 1}$$

4.

$$\frac{2s^5 + 1.6095s^4 + 3.1679s^3 + 1.6320s^2 + 1.0278s + 0.2}{0.2853s^4 + 0.2296s^3 + 0.3446s^2 + 0.1464s + 0.05}$$

5.

$$\frac{1.6095s^4 + 0.2296s^3 + 1.6320s^2 + 0.1464s + 0.2}{2s^5 + 0.2853s^4 + 3.1680s^3 + 0.3446s^2 + 1.0278s + 0.05}$$

6.

$$\frac{38s^5 + 38s^4 + 76s^3 + 45s^2 + 20s + 4}{163s^6 + 163s^5 + 336s^4 + 203s^3 + 105s^2 + 28s + 4}$$