

Part a: $K = 5$ Rate 1/2 Code

In this first part you will create a `fec_conv` object for the $K = 5$ code of Table 1. You will create a BEP plot similar to that found on page 7-41 of the Chapter 7 (text Chapter 12) notes. Note: You will need to increase D to about $5 \times 5 = 25$. Unlike the notes example, your results will be for soft-decision decoding. Functions for computing soft decision decoding upper bounds are contained in the module `fec_conv.py`. In addition to the BEP plot, also provide the trellis plot and a traceback plot under low and high SNR values.

```
In [5]: # Instantiate a fec_conv coder/decoder object
ccl = fec.fec_conv(('10011', '11101'), 25)
ccl.trellis_plot()
```

Note: $2^{K-1} = 16$ states.
 Blue transitions for '0' input bit
 Green transitions for '1' input bit

