**Problem 7.7**

The process of angle modulation involved in the generation of an MSK signal is linear. Justify this assertion.

*Solution*

We first recognize from Problem 7.5 that MSK is an OQPSK signal with only a basic difference:

(i) In OQPSK, the weighting applied to the in-phase and quadrature components of the modulated signal (on a dibit-by-dibit basis) is in the form of a rectangular function. On the other hand, in MSK, the corresponding weighting functions are sinusoidal.

(ii) The OQPSK is the result of a linear modulation process.

In light of these two points, we may therefore state that the angle modulation process involved in generating MSK is a linear process.