

## EBU6018/718U Advanced Transform Methods

### Some Intro Tutorial Questions

1. List the various forms of the Fourier Transform.
2. What is the Fourier Transform used for?
3. What is the principal limitation of the Fourier Transform?
4. What are the basis functions of the Fourier transform?
5. What is meant by the term “Windowed Transform”?
6. What advantage is gained by using a windowed transform?
7. What is the implication of the Uncertainty Principle
  - a) in general, and
  - b) specifically related to windowed transforms?
8. Compare the mathematical expressions for the Fourier Transform and the Short Time Fourier Transform.
9. What is a Wavelet?
10. What advantage does a wavelet transform have over a short time Fourier Transform?
11. How can a wavelet transform be used for “feature extraction”?
12. What is a Spectrogram?
13. What is a Scalogram?