

Code: ECMC2T6A

I M.Tech - II Semester-Regular Examinations – September 2015

TRANSFORM TECHNIQUES
(MICROWAVE & COMMUNICATION ENGINEERING)

Duration: 3 hours

Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1. a) What is the need of transform? List the various types of transform techniques. 7 M
- b) What is the importance of Karhunen-Loeve Transform? Explain with a suitable example. 7 M
2. a) What are applications of Fourier Transform and Fourier Series? Explain. 7 M
- b) Write short notes on Ambiguity functions. 7 M
3. a) What is Multiresolution analysis? Explain in detail. 7 M
- b) What is MRA? How to map a function into MRA space? Explain. 7 M

4. a) What is the need of construction of wavelet? Explain. 7 M
b) How to construct Orthogonal wavelets? Explain. 7 M
5. a) Explain the terms Decimation and Interpolation with suitable example. 7 M
b) What is meant by polyphase representation of filter banks? Explain. 7 M
6. List various applications of Digital Signal Processing. Explain. 14 M
7. How lifting scheme is used to generate a wavelets. 14 M
8. Where Ridgelets and curvelets are used? Explain in detail. 14 M