

Government College of Engineering, Aurangabad
(An Autonomous Institute of Government of Maharashtra)

M.E(Electronics)Examination

End Semester Examination Nov 2016

ET 541: ADVANCED DIGITAL SIGNAL PROCESSING

Time: Three Hours

28.NOV 2016

Max. Marks. 60

“Verify the course code and check whether you have got the correct question paper”

N.B:-

SIX

1. Solve any ~~Four~~ questions
2. Figure to the right indicates full marks
3. Assume suitable data if necessary and state it clearly

1	Explain Non-Parametric methods(Blackman and Turkey) method of spectral estimation used in periodogram averaging . Explain the following parametric methods to measure be spectrum of long duration signals. (i) ARMA model ii) MA model	[10]
2	Describe a technique for implementing decimators and interpolators for and down sampling. Derive the spectrum for upsampler and down sampler	[10]
3	Derive the equation for haar filter bank analysis and synthesis of wavelet transform	[10]
4	Explain multiresolution signal processing of wavelet transform and filter bank	[10]
5	Describe in details the architecture of typical DSP processor TMS320C54xx or TMS320C67xx and state main feature of this processor	[10]
6	Differentiate between wavelet transform and STFT	[05]
	Explain levinson durbin algorithm	[05]
7	Draw block diagram of adaptive filtering and explain with suitable application	[10]
8	(i) Explain adaptive filter. (ii) Derive the weight vector update equation of the LMS algorithm. Discuss adaptive noise cancellation using LMS algorithm	[10]
9	Define haar , CWT , DWT wavelet? Explain polyphase decomposition for wavelet transform?	[10]