

(c) What is a Kaiser window? In what way is it superior to other window function? Explain the procedure for designing an FIR filter using the Kaiser window.

5 Answer any two parts of the following : 10×2

(a) Explain in details the uses of adaptive filter. What is meant by Echo cancellation? Explain in details.

(b) What do you mean Winerear filter? Draw Winerear filter charecteristic. Also write drawback of Winerear filters.

(c) Write short notes on the following:

- (i) Discrete cosine transform
- (ii) Walsh-Hadamard transform.

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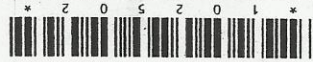
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TEC-502

Printed Pages : 4

PAPERID : 102502



Paper ID and Roll No. to be filled in your Answer Book

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B. Tech.

(SEM. V) (ODD SEM.) EXAMINATION, 2011-12

DIGITAL SIGNAL PROCESSING

Time : 3 Hours]

[Total Marks : 100

Note : Attempt all questions.

1 Answer any four parts of the following: 5×4

- (a) What do you mean by digital signal processing? Explain the advantage and application of digital signal processing.
- (b) Find the response of an FIR filter with impulse response $h[n] = [1, 2, 4]$ to the input sequence $x[n] = [1, 2]$ using Linear transformation method.
- (c) State and prove the following properties of DFT.
 - (i) Circular time reversal
 - (ii) Circular time shift
- (d) Compute circular periodic convolutions of the two sequences $x_1[n] = [1, 1, 2, 2]$ and $x_2[n] = [1, 2, 3, 4]$ using DFT & IDFT method
- (e) State and prove "circular convolution" property of DFT.

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