Unit 16 - Week 11: Discrete Wavelet Transforms (Contd..)

Assignment for week 10 and week 11

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2016-10-02, 23:59 IST.

1) *1 point*

1. Which of the following is/are TRUE regarding DWT using orthonormal basis functi

(a) Scaling functions and its translates at a particular scale are orthonormal.
(b) Wavelet and its translates are orthonormal at a particular scale.
(c) Scaling functions across different scales are orthonormal.
(d) Wavelets across different scales are orthonormal.

- [ ] a
- [ ] b
- [ ] c
- [ ] d

No, the answer is incorrect.
Score: 0

Accepted Answers:
a
b
d

2) *1 point*

2. Select the correct statement with respect to MRA:

(a) Any function in V_{m-1} can be expressed using the basis functions of V_m.
(b) Any function in W_{m-1} can be expressed using the basis functions of V_{m-1}.
(c) Any function in W_m can be expressed using the basis functions of V_{m-1}.
(d) All of the above.

- [ ] a
- [ ] b
- [ ] c
- [ ] d

No, the answer is incorrect.
Score: 0

Accepted Answers:
c

3) *1 point*

3. Which of the following is/are **incorrect** w.r.t. biorthogonal wavelet transform?

(a) The synthesis and analysing functions are identical in a biorthogonal wavelet transfor
(b) The analysing scaling and wavelet functions are orthogonal to each other.
(c) The analysis scaling and the synthesis wavelet functions are orthogonal to each other.
(d) The synthesis scaling and the analysing wavelet functions are orthogonal to each othe

- [ ] a
- [ ] b
- [ ] c
- [ ] d

No, the answer is incorrect.
Score: 0

Accepted Answers:
a
b

4) *1 point*

4. Select the correct statement(s) from the following:

(a) Daubechies wavelets are non-orthogonal.
(b) For given vanishing moments, Coiflets are wider than Daubechies wavelets.
(c) Daubechies wavelets are symmetric.
(d) Coiflets are orthogonal.

- [ ] a
- [ ] b
- [ ] c
- [ ] d

No, the answer is incorrect.
Score: 0

Accepted Answers:
b
d

5) *1 point*

5. Which of the following statement(s) is/are correct with respect to the Haar wavele

(a) $\sqrt{2}\phi(t) = \phi(2t) + \phi(2t-1)$
(b) $\psi(t) = \psi(2t) + \psi(2t-1)$
(c) $\psi(t) = \phi(2t) - \phi(2t-1)$
(d) $\sqrt{2}\phi(t) = \phi(2t) - \phi(2t-1)$

- [ ] a
- [ ] b
- [ ] c
- [ ] d

No, the answer is incorrect.
Score: 0

Accepted Answers:
c

6)

6. For a signal of length 256, coarsest approximation coefficients are obtained at the l
The length of detail coefficients available at level P is 32. The value of $J - P$ is =
Note: Assume that the signal is available at level 0.

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: String) 5

1 point

7)

7. A discrete time signal, $x[k]$ (available at level 0) is decomposed using a 'Haar' wav
The approximation and detail coefficients at level 1 are $[3\sqrt{2}, 2\sqrt{2}, 6\sqrt{2}, 3\sqrt{2}]$ and $[-\sqrt{2}, 0, 2\sqrt{2}, -\sqrt{2}]$ respectively. The value of $\sum_{k=0}^{N} x[k]$, where N being the leng the signal is _____.

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: String) 28

1 point

8)

8. A continuous time signal, $x(t) = \frac{2}{t+1} + e^{-t}$, $0 \leq t < 0.8$ is sampled at a frequency f Hz starting at $t = 0$. The approximation (reconstructed) of the signal at the coarse possible scale using a Haar wavelet is _____.(Report the answer to one decimal pla

No, the answer is incorrect.
Score: 0

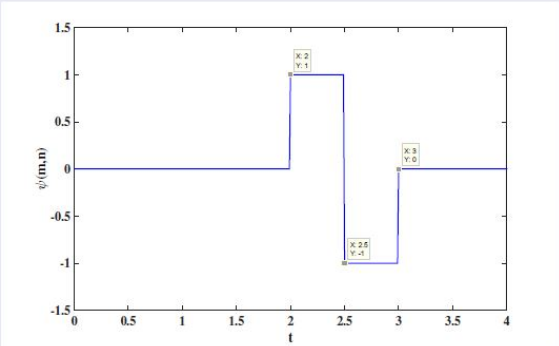
Accepted Answers:
(Type: String) 2.2

1 p

1 p

9)

9. The function given below is a Haar wavelet function $\psi_{m,n}$ used for dyadic DWT.



Which of the following is an appropriate notation for the given function?

(a) $\psi_{2,3}$
(b) $\psi_{0,2}$
(c) $\psi_{1,2}$
(d) $\psi_{1,3}$

- a
- b
- c
- d

No, the answer is incorrect.
Score: 0

Accepted Answers:
b

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