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|  | **ENGINEERING MATHEMATICS III**  **(AAS402)**  **UNIT-V** | | **SESSION: 2022-23** |
| **CLASS/SEM: CSE IVth Sem (EVEN)** |
| Assignment Given Date: 04-05-2023  Assignment Submission Date: 08-05-2023 | | Maximum Points: 40 | |
| Weightage in University Exam: 30 | |
| Faculty Name: Dr. Kunti Mishra | | Faculty Mail Id: [kuntimishra@niet.co.in](mailto:kuntimishra@niet.co.in) | |

**Note: Write solution of each question in clear handwriting.**

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| Q. N. | Question Statement | Pts | CO | BLOOM’S KNOWLEDGE LEVEL |
| 1 | Find continuous wavelet transform of *f*(*x*)=sec2*x* for 0<*x*<1 with respect to Haar wavelet? | 5 | 5 | K4 ,K5 |
| 2 | Express the function f(t)= in terms of and its translates, where is triangle scaling function. | 5 | 5 | K5 |
| 3 | Represent the function *f*(*t*)=2 using the bases of *V1*, *V0* and *W0* space. | 5 | 5 | K5 |
| 4 | Define multiresolution analysis. Which MRA requirement is violated if *Vj* consists of all trigonometric polynomial of degree . | 5 | 5 | K3, K5 |
| 5 | Define and plot the following:  1.Triangle scaling function 2. Haar scaling function 3.Haar wavelet function | 5 | 5 | K3, K5 |
| 6 | Find continuous wavelet transform of of *f*(*x*)=*x*; -1<*x*<1 with respect to Haar wavelet. | 5 | 5 | K5 |
| 7 | Find the unit digit of | 5 | 5 | K5 |
| 8 | How many words can be formed by using all letters of the word "DAUGHTER” so that the vowels always come together? | 5 | 5 | K4, K5 |
| 9 | On rolling a die 2 times, the sum of 2 numbers that appear on the uppermost face is 8. What is the probability that the first throw of die yields 4? | 5 | 5 | K5 |
| 10 | What is the number of zeros at the end of the product 55 × 1010 × 1515 × ........ × 125125? | 5 | 5 | K5 |
| 11 | Let *A*=*R*−{3} and *B*=*R*−{1}. Consider the function *f*:*A*→ *B* defined by *f*(*x*)=(*x*-2)/(*x*-3). Show that *f* is one-one and onto and hence find *f*-1. | 5 | 5 | K4, K5 |