**DAILY ASSESSMENT FORMAT**

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| **Date:** | **5/26/20** | **Name:** | **Sathyab br** |
| **Course:** | | **Digital Signal Processing** | | --- | | **USN:** | **4al16ec065** |
| **Topic:** | **Introduction to Fourier Series,Fourier Transform,Hilbert Transform,Fourier Series Using Matlab** | **Semester & Section:** | **6th semester**  **B section** |
| **Github Repository:** | **sathyabr** |  |  |

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| **FORENOON SESSION DETAILS** |
| **Image of session** |
| **Report – Report can be typed or hand written for up to two pages.**  **Introduction to Fourier Series and Fourier Transform Fourier Series**  **Fourier Transform Euler's Formula**  ∞ *f*(*x*)=1*a*0 +∑(*akcos*2*kt*+*bksin*2*kt*)  −∞  ∞ *X*(*F*) = ∫ *x*(*t*)*e*−*j*2*Ftdt*  −∞ *N*−1  *Xk* = ∑ *xn ej*2Π*kn*/*N n*=0  2  **Hilbert Transform**  **Complex Fourier Series**  *Xk* = *x*0[*cos*(− *b*0) + *jsin*(− *b*0) + .... *X K* = *AK* + *BKj*  *b*  < *f*(*x*),*g*(*x*) >= ∫*f*(*x*)*g*(*x*) *dx a*  *n* <*f*,*g*>Δ*X*= ∑*f*(*x*,*K*)*g*(*x*)Δ*X K*=1  ∞ *f*(*x*)= ∑ *CkeiKX k*=−∞  *eiKX* = *cos*(*Kx*) + *isin*(*Kx*)  **Fourrier Series Using Matlab clear all close all clc**  **figure set(gcf,'Position',[1500 200 2000 1200]) %define domain L=pi; N=1024; dx=2\*L/(N-1); x=L:dx:L; %Define hat function f=0\*x; f(N/4:N/2)=4\*(1:N/4+1)/N; f(N/2+1:3\*N/4)=1-4\*(0:N/4-1)/N; plot(x,f,'-k','Linewidth',3.5),hold on %compute fourier series**  **CC=jet(20) A0=sum(f.\*ones(size(x)))\*dx/pi; fFs=A0/2; for k=1:20;**  ππ < φ φ >= ∫ *eijke*−*jkXdx* = ∫ *ei*(*j*−*k*)*Xdx* = 1 [*ei*(*j*−*K*)*x*]π  *j*, *k i*(*j*−*K*) −π −π −π  0 *i f j* =/ *k* 2π *if j* = *k*    **A(k)=sum(f.\*cos(pi\*k\*x/L))\*dx/pi;**  **B(k)=sum(f.\*sin(pi\*k\*x/L))\*dx/pi; fFs=fFs+A(k)\*cos(k\*pi\*x/L)+B(k)\*sin(k\*pi\*x/L); plot(x,fFs,'-','color',CC(k,:),'Linewidth',2) pause(.1)**  **end** |

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| **Date:** | **5/26/20** | **Name:** | **Sathya br** | |
| **Course:** | **Python Core and Advanced** | **USN:** | **4al16ec065** | |
| **Topic:** | **Datatypes** | **Semester & Section:** |  | |
| **AFTERNOON SESSION DETAILS** | | | |
| **Image of session** | | | |
| **Report – Report can be typed or hand written for up to two pages.**   * **Introduction** * **Numeric Types** * **Complex , Binary and Hexadecimal Types** * **Boolean Types** * **Type Conversion Functions** | | | |