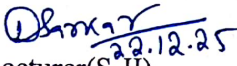
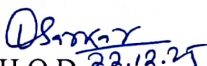


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| DISCIPLINE: Electrical & Electronics Engg. | SEMESTER: 4 th Semester | NAME OF THE TEACHING FACULTY: MRS DEEPIKA SARKAR, Lecturer -II in ETC |
| SUBJECT: DSP (TH-05) | NO OF DAYS/PER WEEK CLASSES ALLOTTED:03 | SEMESTER FROM DATE: 22.12.2025 TO DATE: 18.04.2026 NO OF WEEKS:15 |

| Week | Class Day | Topics |
|------------------|-----------------|--|
| | | UNIT-I:-Discrete Time Signals |
| 1 st | 1st | 1.1 Sequences |
| | 2nd | 1.2 Representation of signals on orthogonal basis |
| | 3rd | 1.3 Sampling and reconstruction of signals |
| 2 nd | 1 ST | 1.4 Discrete systems attributes |
| | 2 ND | 1.5 Z-Transform |
| | 3 RD | 1.6 Analysis of LSI systems |
| 3 rd | 1st | 1.7 Frequency Analysis |
| | 2nd | 1.8 Inverse Systems |
| | 3rd | 1.9 Discrete Fourier Transform (DFT) |
| 4 th | 1st | 1.10 Fast Fourier Transform Algorithm |
| | 2nd | 1.10 Fast Fourier Transform Algorithm |
| | 3rd | 1.11 Implementation of Discrete Time Systems |
| 5 th | 1st | 1.11 Implementation of Discrete Time Systems |
| | 2nd | DOUBT CLEARING |
| | 3rd | PROBLEM SOLVING |
| | | UNIT-II:-Design of FIR Digital Filters |
| 6 th | 1 ST | Window method |
| | 2 ND | Park-McClellan's method |
| | 3 RD | Design of IIR Digital Filters: Butterworth, |
| 7 th | 1st | Chebyshev |
| | 2nd | Elliptic Approximations |
| | 3rd | Elliptic Approximations |
| 8 th | 1 ST | Low pass filters |
| | 2 ND | Low pass filters |
| | 3 RD | Band pass filters |
| 9 th | 1st | Band stop filters. |
| | 2nd | High pass filters |
| | 3rd | High pass filters |
| 10 th | 1 ST | Repeat |
| | 2 ND | Doubt clearing class |
| | 3 RD | Monthly test |
| | | UNIT-III:-Finite Register Length in FIR Filter Design |
| 11 th | 1st | Effect of finite register length in FIR filter design. |
| | 2nd | Effect of finite register length in FIR filter design. |
| | 3rd | Parametric and non-parametric spectral estimation |

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|------------------|-----------------|---|
| 12 th | 1 ST | Parametric and non-parametric spectral estimation |
| | 2 ND | Parametric and non-parametric spectral estimation |
| | 3 RD | Introduction to multirate signal processing |
| 13 th | 1st | Introduction to multirate signal processing |
| | 2nd | Doubt clearing class |
| | | UNIT-IV:-Applications of DSP |
| | 3rd | Application of DSP to Speech signal processing. |
| 14 th | 1 ST | Application of DSP to Speech signal processing |
| | 2 ND | Application of DSP to Radar signal processing. |
| | 3 RD | Application of DSP to Radar signal processing |
| 15 th | 1st | Repeat class |
| | 2nd | Extra class |
| | 3rd | Monthly test |


Lecturer(S-II)
22.12.25


H.O.D 22.12.25
Electrical&Electronics Engg.


Principal
Govt.Polytechnic,Malkangiri