**V SEMESTER B. TECH (ELECTRICAL & ELECTRONICS ENGINEERING)**

**FISAC ASSESSMENT**

**DIGITAL SIGNAL PROCESSING [ELE 3122]**

Time: **15 days**

Date and Time of submission: 27th **October 2025, 05:00 PM**

Max Marks: **10**

Max group size **: 05** (Group should be formed within the same section)

Choose any topic from the list below. Perform literature review (research objective, methodology and results in brief) of atleast 15 SCOPUS indexed journal papers OR IEEE conference papers in the choosen area, simulate the application using any licensed software. Upload the report (Section_RollNumber1, 2.doc) in IEEE format (DSP 2025 - FISAC - Report) .

1) Applications of Linear Convolution
2) Applications of Circular Convolution – Image filtering
3) Applications of Linear Convolution using circular convolution
4) Applications of Circular convolution using Linear Convolution
5) Applications of Discrete Time Fourier Series (DTFS)
6) Applications of Discrete Time Fourier Transform (DTFT)
7) Compare Z transform and DTFT
8) Compare DTFT and DFT: Time and Frequency
9) Applications of N point FFT – Audio signal compression and reconstruction using FFT, Edge detection in images.
10)      Applications of IIR and FIR Filter