St. Francis Institute of Technology
Borivali (West), Mumbai-400103

Information Technology Department

Academic Year: 2023-24 **Semester: III**
Class / Branch / Division: SE - IT A/B **Subject: Principle of Communication**

MODULE – 2A – Fourier Transform

IMPORTANT QUESTIONS

Q1. Define Fourier Transform and Inverse Fourier Transform.

Q2. State conditions for existence of Fourier Transform.

Q3. Express the following signals mathematically and draw its waveform –

- Delta signal
- Step signal
- Rectangular/ Gate signal
- Sine and cosine signal
- Ramp Signal
- Exponential signal
- Gaussian signal
- Sinc Signal

Q4. State and prove the following properties of Fourier transform -

- Time scaling
- Time shifting
- Frequency shifting

Q5. Determine Fourier Transform of –

- Rectangular/Gate signal of amplitude A
- Unit step signal
- Delta signal

Subject Incharge

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