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|  | JAYPEE UNIVERSIY OF ENGINEERING & TECHNOLOGY **TUTORIAL SHEET-3**  **COMMUNICATION SYSTEM (14B11EC515)** |



**Q 1**. Find the Fourier transform of sinc function.

**x(t) = Asinc(2)**

**Q 2.** Show that the total area under the curve of sinc function is unity.

**Q3.** Using time shifting property, find Fourier transform of

x(t) =

**Q4.** Using frequecy shifting property, find Fourier transform of

x(t) =

**Q 5**.Find the Fourier transform of the exponentially damped sinusoidal wave

x(t) =

**Q6.** Find the Fourier transform of the normalized Gaussian pulse

x(t) =

**Q7.** Use time differentiation property to find the Fourier transform of the triangular pulse.

**Q8.** Estimate the essential bandwidth W (in rad/sec) of the signal u(t) if the essential band is required to contain 95% of the signal energy.