1. **The message signal**

$$m(t) = \begin{cases} 1\ , & 0 \le t \le \frac{t_0}{3} \\ -2\ , & \frac{t_0}{3} < t \le \frac{2t_0}{3} \\ 0\ , & Otherwise \end{cases}$$

This message DSB-AM modulates the carrier c (t) =cos ($2\pi f_c t$).Plot the m (t), c (t) and modulated signal s (t).Assume that t_0=0.15s and f_c=250Hz.

2. Plot the Fourier spectrum of message signal and modulated signal of DSB-AM.