4.26. The continuous-time signal $x(t)$ with FT as depicted in Fig. P4.26 is sampled. Identify in each case if aliasing occurs.

(a) Sketch the FT of the sampled signal for the following sampling intervals:

(i) Ts=1/14, No aliasing occurs.

(ii) Ts=1/7, since Ts>1/11, aliasing occurs.

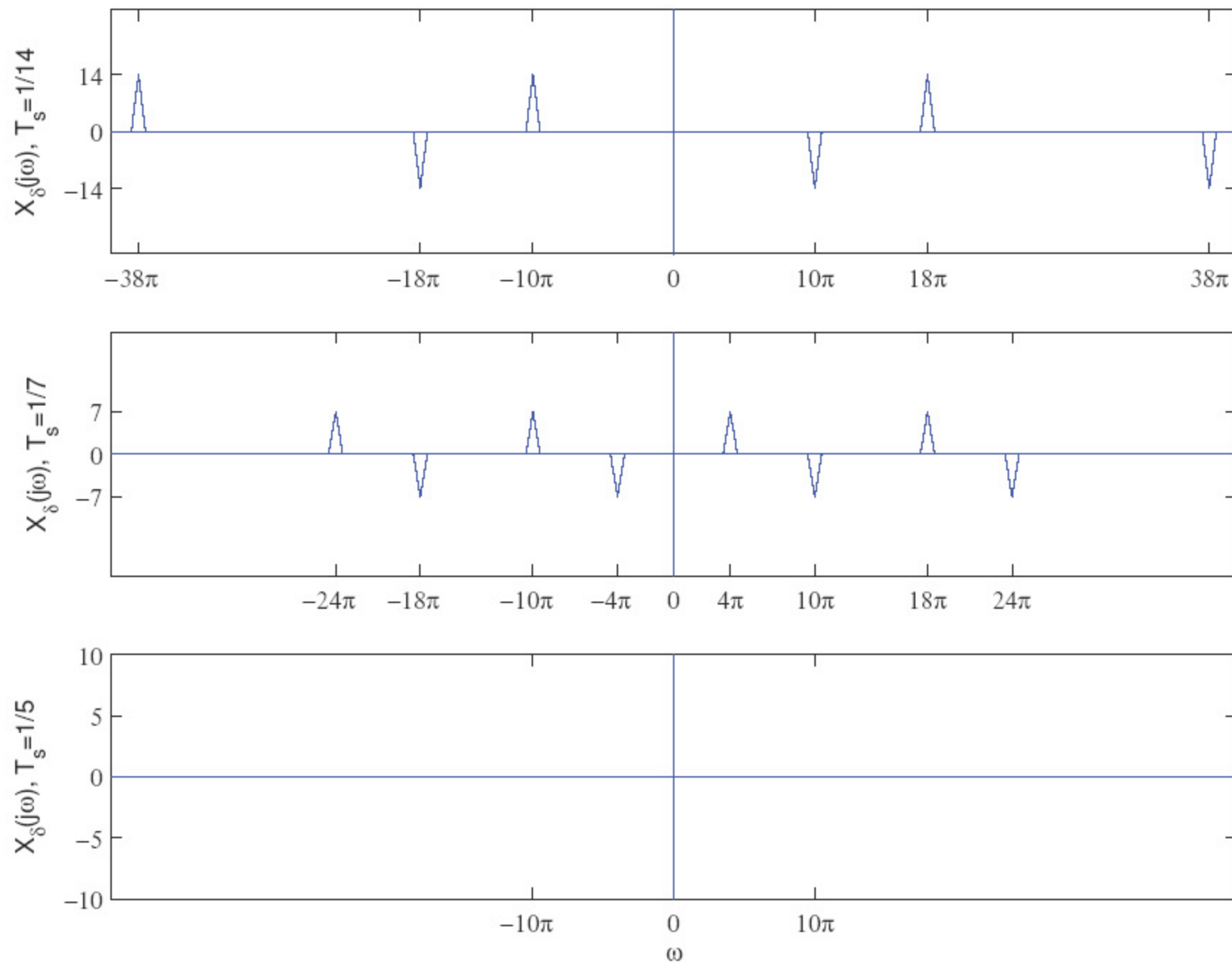(iii) Ts=1/5, since Ts>1/11, aliasing occurs.

Figure P4.26. FT of the sampled signal

(b) Let $x[n] = x(nT_s)$. Sketch the DTFT of $x[n]$, $X(e^{j\Omega})$, for each of the sampling intervals given in (a).

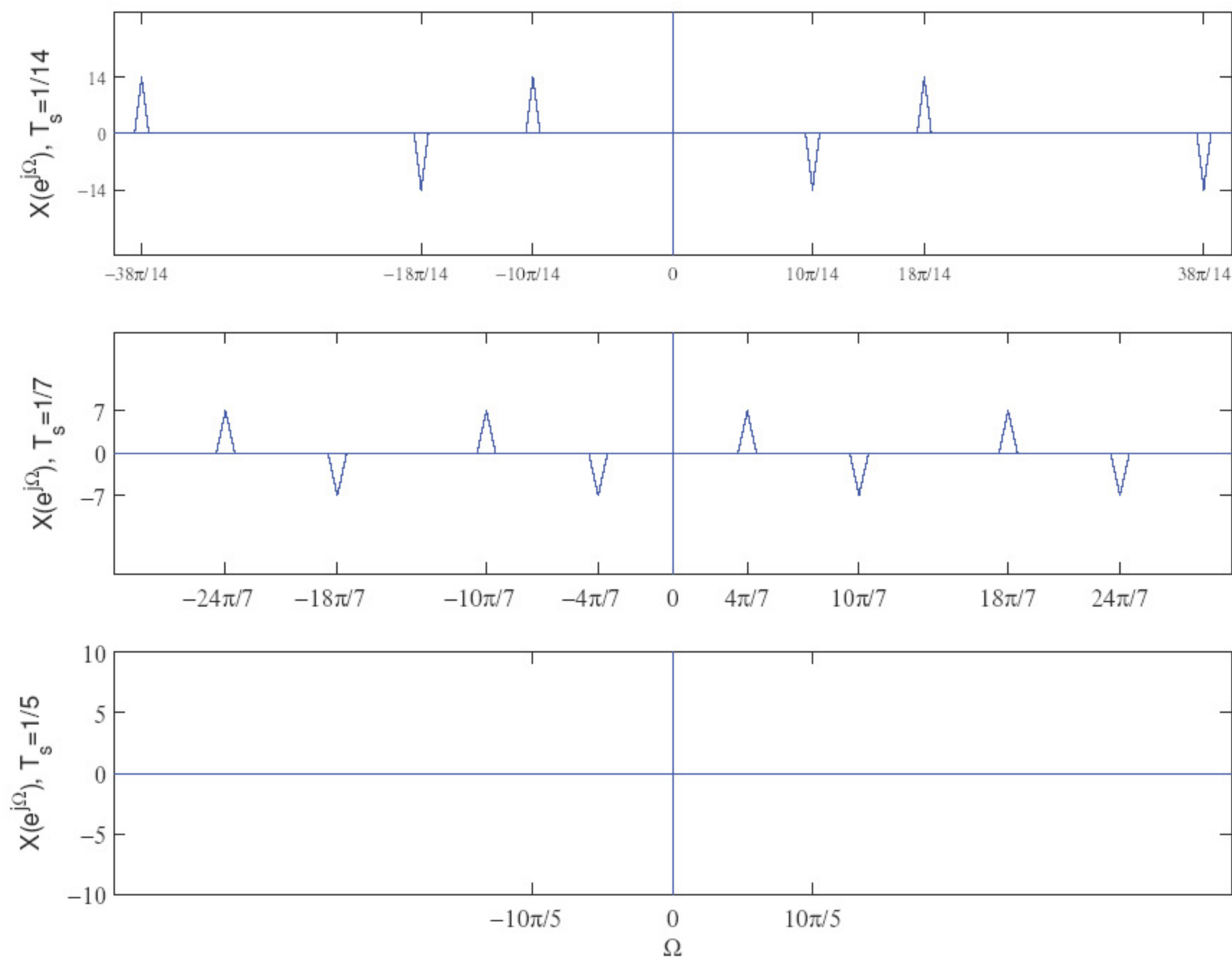The DTFT simple scales the 'x' axis by the sampling rate.

Figure P4.26. DTFT of x[n]