What does an additional linear spectral phase term exp(i$\omega\tau$) correspond to in the time domain?

A temporal shift by τ.

The FWHM energy bandwidth of a 1 fs short FWHM (transform limited)Gaussian pulse is about

2 eV

10 eV

100 meV

2 eV is the correct answer.

The coherent superposition of two electronic states spaced by 20 eV results in a wavepacket with a period of

207 as (attoseconds).