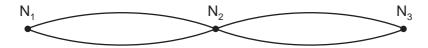
22	The	order	of	magnitude	of	the	frequency	of	the	longest-wavelength	ultraviolet	W
	expr	essed	as	10 ^x Hz.								

What is the value of x?

- **A** 13
- **B** 15
- **C** 17
- **)** 19
- 23 The light from two lasers passes through a vacuum. One laser emits red light and the other emits green light.

Which property of the two laser beams must be different?

- A amplitude
- **B** frequency
- C plane of polarisation
- **D** speed
- 24 The diagram shows a standing wave on a string. The standing wave has three nodes N_1 , N_2 and N_3 .



Which statement is correct?

- **A** All points on the string vibrate in phase.
- **B** All points on the string vibrate with the same amplitude.
- **C** Points equidistant from N₂ vibrate with the same frequency and in phase.
- **D** Points equidistant from N_2 vibrate with the same frequency and the same amplitude.
- **25** A parallel beam of light of wavelength 450 nm falls normally on a diffraction grating which has 300 lines/mm.

What is the total number of transmitted maxima?

- **A** 7
- **B** 8
- **C** 14
- **D** 15

Space for working