

- 25** A man standing next to a stationary train hears sound of frequency 400 Hz emitted from the train's horn. The train then moves directly away from the man and sounds its horn when it has a speed of  $50 \text{ m s}^{-1}$ . The speed of sound in the air is  $340 \text{ m s}^{-1}$ .

What is the difference in frequency of the sound heard by the man on the two occasions?

- A** 51 Hz                      **B** 69 Hz                      **C** 350 Hz                      **D** 470 Hz

- 26** Which list of regions of the electromagnetic spectrum is in order of increasing wavelength from left to right?

- A** gamma-ray → ultraviolet → infrared  
**B** infrared → microwave → ultraviolet  
**C** microwave → X-ray → infrared  
**D** X-ray → ultraviolet → gamma-ray

- 27** The principle of superposition states that a certain quantity is added when two or more waves meet at a point.

What is this quantity?

- A** amplitude  
**B** displacement  
**C** intensity  
**D** wavelength