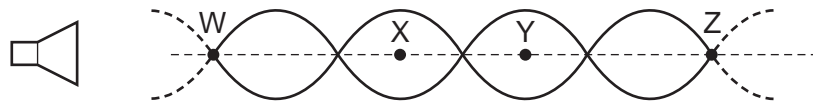**22** Diffraction is the name given to the

    A   addition of two coherent waves to produce a stationary wave pattern.

    B   bending of waves round an obstacle.

    C   change of direction when waves cross the boundary between one medium and another.

    D   splitting of white light into colours.

23 Which wave properties change when light passes from air into glass?

    A   colour and speed

    B   frequency and wavelength

    C   speed and wavelength

    D   wavelength and colour

24 The diagram represents the pattern of stationary waves formed by the superposition of sound waves from a loudspeaker and their reflection from a metal sheet (not shown).

W, X, Y and Z are four points on the line through the centre of these waves.

Which statement about these stationary waves is correct?

    A   An antinode is formed at the surface of the metal sheet.

    B   A node is a quarter of a wavelength from an adjacent antinode.

    C   The oscillations at X are in phase with those at Y.

    D   The stationary waves oscillate at right angles to the line WZ.

Space for working