6 **(a)** Describe the conditions required for two waves to be able to form a stationary wave.

....

....

....

.... [2]

(b) A stationary wave on a string has nodes and antinodes. The distance between a node and an adjacent antinode is 6.0 cm.

(i) State what is meant by a *node*.

.... [1]

(ii) Calculate the wavelength of the two waves forming the stationary wave.

wavelength = ... cm [1]

(iii) State the phase difference between the particles at two adjacent antinodes of the stationary wave.

phase difference = ... ° [1]