Question Number	Answer	Additional guidance	Mark
2(a)(i)	A calculation in which: • conversion of actual length of scale into nm (1) • actual length divided by the given length (answer given to 2 significant figures and in standard form) (1)	<u>Example of calculation:</u> 35mm = 35 000 000 nm 35 000 000 ÷ 1200 = ×2.9 x 10^4 accept +/- 1mm for length of bar	**(2)**

Question Number	Answer	Additional guidance	Mark
2(a)(ii)	An explanation that makes reference to two of the following points: • electron microscope (1) • due to high magnification (1)	ecf from 2(a)(i) applies Accept high resolution Accept converse for light microscope Accept 3D image if qualified as scanning electron microscope	**(2)**

Question Number	Answer	Additional guidance	Mark
2(b)(i)	An answer that makes reference to the following points: • presence of {(peptidoglycan) cell wall / circular chromosome(s) / DNA associated with histones / 70S ribosomes / RNA polymerase} (1) • absence of {nucleus / membrane bound organelles} (1)	Accept ether bonds	**(2)**

Question Number	Answer	Additional guidance	Mark
2(b)(ii)	An explanation that makes reference to three of the following points: • (analysis of) molecular evidence (1) • to identify similarities and differences in biological molecules / comparison of biological molecules (1) • (analysis of) phenotype (1) • to identify similarities and differences between the two microorganisms (phenotype) (1)	e.g. DNA, mRNA, proteins, enzymes e.g. cell structure / anatomical features, grow in different {habitats/ conditions} e.g. named similarities and differences in cell structure	**(3)**