

1 Cell structure – Part 2 —Answers

Answers

1.1 A cell wall (cellulose), chloroplasts, and a large permanent vacuole.

1.2 Any one: a prokaryote has no nucleus (DNA is free and circular); it has no membrane-bound organelles; it is smaller; its cell wall is peptidoglycan; its ribosomes are smaller.

1.3 A nucleic acid core (DNA or RNA), a protein capsid, and (in some) an outer envelope.

1.4 It is not made of cells—it has no cytoplasm, organelles or ribosomes.

1.5 It has no ribosomes or organelles of its own, so it cannot make proteins or copy itself; it must use a host cell's machinery.

1.6 Antibiotics attack structures or processes found in bacteria—such as the bacterial cell wall or ribosomes. A virus has none of these and instead hijacks the host cell's own machinery, so there is nothing for the antibiotic to act on.