

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.