Question	Answer
What are heterocysts?	Specialised cells that fix atmospheric nitrogen.
Name two cyanobacteria having heterocysts.	Nostoc and Anabaena.
What do chemosynthetic autotrophic bacteria oxidise?	Inorganic substances such as nitrates, nitrites and ammonia.
What is the role of chemosynthetic autotrophic bacteria in nature?	Recycling nutrients like nitrogen, phosphorus, iron and sulphur.
Which bacteria are most abundant in nature?	Heterotrophic bacteria are most abundant in nature.
What is the major ecological role of most heterotrophic bacteria?	They act as important decomposers.
Mention two useful activities of bacteria for humans.	Making curd from milk and production of antibiotics.
What role do some bacteria play in legumes?	They fix nitrogen in legume roots.
Name four diseases caused by bacteria mentioned in the text.	Cholera, typhoid, tetanus and citrus canker.
How do bacteria mainly reproduce?	Mainly by fission.
What do bacteria produce under unfavourable conditions?	Spores.
How does sexual reproduction occur in bacteria?	By a primitive type of DNA transfer from one bacterium to another.
What is special about Mycoplasma?	They completely lack a cell wall.
What is the size characteristic of Mycoplasma?	They are the smallest living cells known.
Can Mycoplasma survive without oxygen?	Yes, they can survive without oxygen.
Are many Mycoplasma pathogenic?	Yes, many Mycoplasma are pathogenic in animals and plants.
Which organisms are included under Kingdom Protista?	All single-celled eukaryotes.
Name the groups included under Protista in this book.	Chrysophytes, Dinoflagellates, Euglenoids, Slime moulds and Protozoans.
What is the primary habitat of Protists?	They are primarily aquatic.
Why is Kingdom Protista considered a link with other kingdoms?	It forms a link with kingdoms dealing with plants, animals and fungi.
What cellular features are present in protists as eukaryotes?	A well-defined nucleus and membrane-bound organelles.
What locomotory structures may protists possess?	Flagella or cilia.

Question	Answer
How do protists reproduce?	Both asexually and sexually through cell fusion and zygote formation.
Which organisms are included under Chrysophytes?	Diatoms and golden algae (desmids).
Where are Chrysophytes found?	In freshwater and marine environments.
What is plankton?	Microscopic organisms that float passively in water currents.
What is the mode of nutrition in most Chrysophytes?	Photosynthetic.
Describe the cell wall of diatoms.	It forms two thin overlapping shells fitting together like a soap box.
What substance is embedded in diatom cell walls?	Silica.
Why are diatom cell walls indestructible?	Because they are embedded with silica.
What is diatomaceous earth?	Large deposits of diatom cell walls accumulated over billions of years.
Mention two uses of diatomaceous earth.	Polishing and filtration of oils and syrups.
What ecological role do diatoms play in oceans?	They are the chief producers in oceans.
What is the habitat of most dinoflagellates?	Marine habitat.
What pigments may make dinoflagellates appear different colours?	Yellow, green, brown, blue or red pigments.
What type of cell wall do dinoflagellates possess?	Cell wall with stiff cellulose plates on the outer surface.
How many flagella are present in most dinoflagellates?	Two flagella.
What is red tide?	Rapid multiplication of red dinoflagellates making the sea appear red.
Which dinoflagellate example is associated with red tides?	Gonyaulax.
What harmful effect can red tides cause?	Toxins released may kill marine animals such as fishes.
Where are most euglenoids found?	In stagnant freshwater.
What replaces the cell wall in euglenoids?	A protein-rich layer called pellicle.
What is the function of pellicle in euglenoids?	It makes the body flexible.
How many flagella are present in euglenoids?	Two flagella, one short and one long.
What is the mode of nutrition in all protozoans?	All protozoans are heterotrophs.

Question	Answer
How do protozoans generally live?	As predators or parasites.
Protozoans are believed to be primitive relatives of which kingdom?	Animal kingdom.
Name the four major groups of protozoans.	Amoeboid protozoans, flagellated protozoans, ciliated protozoans and sporozoans.
Where do amoeboid protozoans live?	In freshwater, seawater or moist soil.
How do amoeboid protozoans capture prey?	By putting out pseudopodia (false feet).
Which protozoan is an example of amoeboid protozoans?	Amoeba.
What is present on the surface of marine amoeboid protozoans?	Silica shells.
Name a parasitic amoeboid protozoan.	Entamoeba.
What are the characteristics of flagellated protozoans?	They may be free-living or parasitic and possess flagella.
Which disease is caused by parasitic flagellated protozoans?	Sleeping sickness.
Name the protozoan that causes sleeping sickness.	Trypanosoma.
Why are ciliated protozoans actively moving organisms?	Due to the presence of thousands of cilia.
What is the feeding cavity in ciliated protozoans called?	Gullet.
How does food enter the gullet in ciliated protozoans?	Coordinated movement of cilia steers water laden with food into the gullet.
Name an example of ciliated protozoans.	Paramoecium.