

Chapter 1: Biology: the science of life

A. Fill in the blanks

1. Unicellular
2. Autotrophs
3. Life cycle
4. Respiration
5. Sensitivity
6. Life span

B. Choose the correct option

1. C. excretion
2. C. heterotrophs
3. D. leaves and bark
4. A. stimuli
5. D. locomotion

C. Write true or false. If false, write the correct statement.

1. True
2. False. Plants do respond to stimuli.
3. True
4. False. Not all plants grow from seeds.
5. True

D. Answer the following.

1. a) Living beings are made of cells.
b) Living beings grow.
c) They need food.
d) They respire.
e) They throw out waste.
f) Living beings move.
g) They reproduce.

h) Living beings follow a life cycle.

2. Unicellular-bacteria Multicellular- human beings.

3. Animals depend on others for food and hence are called heterotrophs.

4. Leaves of sensitive plants close when touched. Flowers open in the morning and close in evening.

5. Carbon dioxide and water

6. Some animals lay eggs and others give birth to young ones.

E. Explain in brief

1. A balloon grows in size when we blow air into it. This growth is different from that of a living being. It happens because something is being added from outside. A living being grows from inside as its cells grow and multiply.

2. Plants give off gases through minute pores present in their leaves. They cannot throw the solid waste. They store these in the parts such as leaves and bark. When they shed their leaves and bark, the waste accumulated in them gets expelled.

3. Animals can move different parts of their body and also can move from one place to other. Different parts of the plant show movement. Weak stems of the climber twine around support. Stems bend towards the light and flowers open and close. Non-living things like vehicles also show movement, but they can only move using some source of energy outside them.

Chapter 2: The cell

A. Fill in the blanks

1. Robert Hooke

2. Structural and functional

3. Selectively permeable

4. Nucleoli

5. Nucleus

6. Mitochondria

7. Chloroplast

B. Choose correct option

1. C. plasma membrane

2. D. cell membrane is impermeable

3. B. plastids

4. A. chloroplast

5. D. It stores energy for cell function.

C. Write true or false. If false, write the correct statement.

1. False. Cells were first observed in cork.

2. True

3. False. Chromosomes are located in nucleus.

4. True

5. True

6. False. Chromoplasts produce the color of ripe fruits.

D. Match the following

1. E
2. C
3. F
4. A
5. B
6. D

E. Answer the following.

1. All living organisms are made of cells and the cells carry out all the life processes hence the cell is called as structural and functional unit.
2. Tiny structures that lie suspended in the cytoplasm are called as organelles. Ex nucleus, plastids, mitochondria etc.
3. Mitochondria help breakdown glucose and converts its energy into a form that can be used easily by the cell to power all its functions. That's why mitochondria is referred as "the power house of the cell".
4. Nucleus contains nucleoplasm, nucleolus and chromatin network. (Draw a diagram given on page no. 9)
5. All colored pigments other than green that we see in plants are produced and stored by chromoplasts. The color of ripe fruits is because of these chromoplasts.

F. Answer in brief

1. The life of higher organisms start with a single cell called zygote. The single cell divides into two cells and two to four cells and so on. Thus zygote grows into an embryo, embryo into baby and baby into an adult.

2.

Plant Cell	Animal Cell
Enclosed by cell wall and cell membrane	Enclosed only by cell membrane
Plastids are present	Plastids are not present
Vacuoles are present	Vacuoles are absent

(Draw a diagram given on page no. 8)