



Unit 3 • Organisms and their Structure: invertebrates and the cell

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 33

1 Key words

[4]

Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

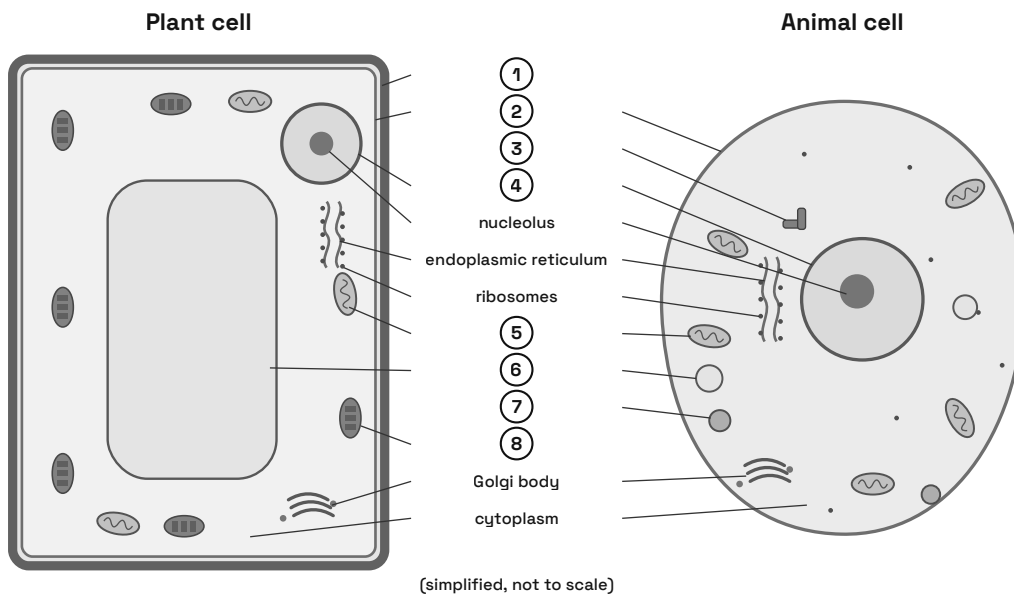
Annelida chloroplast Coelenterata Echinodermata functional invertebrates nucleus
Porifera Protozoa suicide bag

Animals without a backbone are called _____. All single-celled animals, such as Amoeba, are put in the phylum _____, and sponges in the phylum _____. Earthworms and leeches have cylindrical, segmented bodies and belong to _____. Starfish, which live only in the sea, belong to _____. The cell is the structural and _____ unit of life. The _____ is the control center of a cell, and the lysosome is called its _____.

2 Label the diagram

[4]

The diagram shows a plant cell and an animal cell. Write the names of the parts numbered 1 to 8. Each carries 0.5 mark.



1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____



[5]

Choose the correct option for each of the following questions.

- i. In which phylum is the snail? [1]
- a. Platyhelminthes b. Annelida
c. Nematelminthes d. Mollusca
- ii. Which of these is a unisexual parasite with a cylindrical, unsegmented body? [1]
- a. leech b. Ascaris
c. tapeworm d. slug
- iii. What is the main feature of the phylum the prawn belongs to? [1]
- a. wings b. living in water
c. a segmented body d. segmented (jointed) legs
- iv. Which component of a cell is semi-permeable? [1]
- a. cell membrane b. endoplasmic reticulum
c. cell wall d. vacuole
- v. Which of these describes a plant cell? [1]
- a. it has a cell wall, plastids, a centrosome and a vacuole
b. it has a cell wall, a cell membrane, plastids and a vacuole
c. it has a cell membrane, a centrosome, ribosomes and cytoplasm
d. it has a nucleus, plastids, lysosomes and a centrosome

[4]

Write very short answers to the following questions.

- | | | |
|-------------|--|-----|
| a. | Which part of a cell is called its powerhouse? | [1] |
| <hr/> <hr/> | | |
| b. | Name the phylum of Hydra. | [1] |
| <hr/> <hr/> | | |
| c. | What is the cell wall made of? | [1] |
| <hr/> <hr/> | | |
| d. | Which part of the cell makes proteins? | [1] |
| <hr/> | | |



5 Short answers

[10]

Write short answers to the following questions.

a. Why is a butterfly put in the phylum Arthropoda?

[2]

b. Write one similarity and one difference between flatworms and roundworms.

[2]

c. Write any two differences between the cell membrane and the cell wall.

[2]

d. Which part of a cell is called the powerhouse of the cell, and why?

[2]

e. Ascaris and the earthworm look alike, but they are put in two different phyla. Explain why.

[2]

6 Long answer

[4]

Write a long answer to the following question.

Write any four differences between an animal cell and a plant cell.



7 Think

[2]

Think, then answer.

Because of which part of their cells can plants help to keep the air in balance? Explain.

8 Activity: Cheek cells and onion cells (Activities 3.18 and 3.19)

(not marked)

With your teacher, make a slide of your cheek cells (stained with methylene blue) and one of onion peel (stained with safranin). Look at both under the microscope and fill in the table.

	Cheek cell	Onion cell
Shape (regular or irregular)		
Cell wall seen?		
Where the nucleus is		
Vacuole (large, small or none)		
Plant cell or animal cell?		

Why do the onion cells have a fixed shape?

