

Partie 1 :

1- Definition of cell biology:

- ◆ Explain what cell biology is and its importance within the life sciences.

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2- The first cell biologists

Match each of the following scientists to their contribution to cell biology.:

- Robert Hooke:
- Matthias Schleiden:
- Theodor Schwann:
- Rudolf Virchow :

3- Cell theory:

- ◆ Describe the three fundamental principles of cell theory.

- 1)
- 2)
- 3)

- ◆ Who are the scientists who contributed to the development of this theory?

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4- What is the importance of compartmentalization in the eukaryotic cell? "

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5- Complete the table

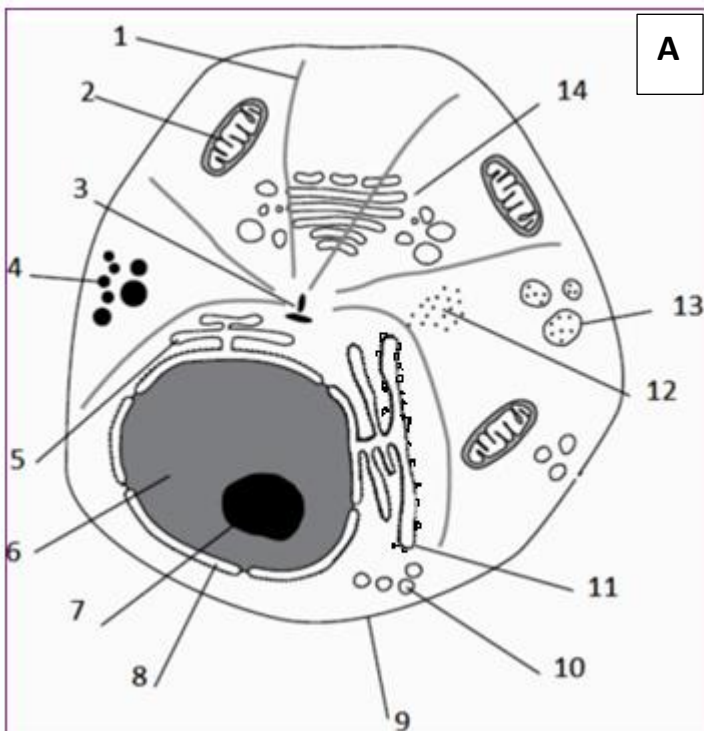
Characteristics	Prokaryotic cells	Eukaryotic cells
Presence of a nucleus		
Cell size		
DNA organization		
Presence of membrane-bound organelles		
Type of cell division		
Examples of organisms		

Part 2 : Exercise:

1. Label the figures below.
2. State the differences between the animal cell and the plant cell.

3. List the characteristics of fungi.

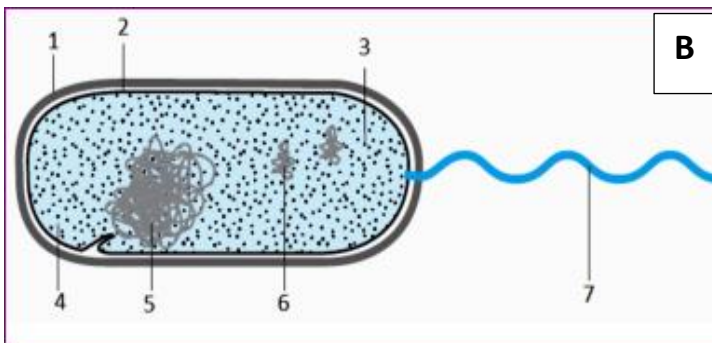
4. Provide a classification for structure C.



A

Title.....

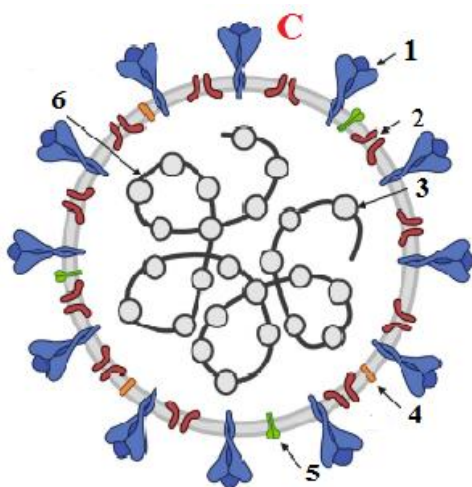
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B

Title.....

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2. Differences between the animal cell and the plant cell

Characteristics	Plant cell	animal Cell
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3. Characteristics of fungi

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4. Classification of Structure C.

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Family:

Subfamily:

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Genera :

- **Alphacoronavirus:**
- **Betacoronavirus:**
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- **Gammacoronavirus:**
- **Deltacoronavirus:**

Notable examples of betacoronaviruses that infect humans:

- **SARS-CoV** (Severe Acute Respiratory Syndrome, 2003)
- **MERS-CoV** (Middle East Respiratory Syndrome, 2012)
- **SARS-CoV-2** (responsible for the COVID-19 pandemic, 2019)

Coronaviruses are thus diverse and can cause mild to severe infections, including respiratory illnesses in humans.